Manitoba
Energy and Mines
Geological Services

Mineral Deposit Series

Report No. 3

Mineral Deposits and Occurrences in the Flin Flon Area NTS 63K/13: Part III, Weasel Bay (63K/13NW) and Defender Lake (63K/13NE)

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MDS Map No. 3: Mineral Deposits and Occurrences in the Weasel Bay (63K/13NW) and Defender Lake (63K/13NE) area, Manitoba . . . . . In pocket

INTRODUCTION

This report and accompanying map (MDS Map No. 3) are part of a Mineral Deposit Series presenting a uniformly organized and up-to-date collation and analysis of information on mineral occurrences in the Province of Manitoba. The series is intended: (1) to provide explorationists with a geoscientific data base that can be used in mineral exploration; and (2) to provide a technical data base for other government users in resource evaluations, formulation of mineral and land use policies and the initiation of regional development programs.

METHODOLOGY

The documentation program was initiated in the main mining districts of the province under the 1984-1989 Mineral Development Agreement. Under this project mineral deposit geologists of the Geological Services Branch have attempted to inspect and evaluate each known mineral occurrence. These site visits ranged from a preliminary half day or less search of an area for old workings, to extensive geological mapping of selected occurrences for a week or more. Although a small number of occurrences were not located or were not visited, generally more than 95% were located and examined during this initial phase of the documentation.

In addition, for each occurrence the geologists have attempted to synthesize available data from published and unpublished sources. The Manitoba Mineral Inventory Card Index and the cancelled Assessment Files have been used extensively in the preparation of the report.

The information has been collated and maps prepared with the assistance of junior staff geologists and summer assistants. Senior mineral deposit geologists have provided the deposit classifications and text for the report.

Deposit versus Occurrence

Throughout this report mineralization is referred to as a *deposit* if tonnage and grade figures are known; all other mineralization is referred to as an *occurrence*. No attempt has been made to set lower limits for deposit sizes.

Massive Sulphide versus Solid Sulphide

The use of 'massive sulphide' in the geological literature is confusing in that it is not always clear whether the authors are referring to a 'massive sulphide deposit' (cf. Sangster, 1972) or a section of sulphide-rich rock. In this publication 'massive sulphide' will be used in reference to a *deposit type*, i.e. a volcanogenic massive sulphide deposit type, rather than the nature of the mineralization. A volcanogenic or sedimentogenic massive sulphide deposit can contain a sulphide lens that locally contains as little as 10% sulphide minerals by volume and the alteration zones that are an integral part of many sulphide deposits, or the only portion remaining, rarely contain more than 50% sulphide minerals. Consequently, the use of 'solid sulphide' for 90% - 100% and 'near solid sulphide' for 50% - 90% sulphide minerals is adopted in place of the commonly used term 'massive' to describe the textural aspects of a sulphide mineralization.

FORMAT OF MINERAL DEPOSIT MAPS:

Location:

One of the incentives spurring the mineral deposit documentation was the absence of accurate location maps for known mineral occurrences. Inaccurate land bases have previously resulted in failure to find old workings, surveys conducted in the wrong areas, and even cancellation of intended surveys by explorationists. Consequently, considerable field time has been spent in establishing occurrence locations and attempts have been made to display exact locations both on the Mineral Deposit Map and in the accompanying report.

The location number on the map is a unique reference number that will be used both in the reports and the geologists' unpublished data base. These numbers are consecutive within each 1:50 000 NTS map sheet (but not within portions of a map sheet such as a mineral deposit map MDS Map No. 3).

Deposit Types:

In order to maintain a mineral deposit classification, which will be useful to both explorationists and metallogeneticists, a simplified descriptive classification was selected. This classification is based on the use of common *deposit types* for the classification of both deposits and occurrences. The classification of mineralization is based on the premise that the mineral explorationist requires information on metals and types of mineralization in an area as well as on the *economic* deposits (past, present and future producers).

All deposits and occurrences are classified according to the Deposit Type classification in Table 1.

The deposit type displayed on the map represents the mineralization with the greatest economic potential, for example a disseminated narrow chalcopyrite layer is emphasized rather than a much thicker solid pyrite-graphite layer.

Mineralization:

A symbol is used to denote the percentage and/or type of mineralization present. At some localities more than one type of mineralization is present. The type of mineralization displayed in the symbol represents the mineralization with the greatest economic potential as indicated by the deposit type symbol.

TABLE 1. MINERAL DEPOSIT TYPES

STRATABOUND MASSIVE SULPHIDE TYPE DEPOSITS
- a) Volcanic rock-associated
- b) Sedimentary rock-associated
- c) Alteration zone associated with a or b

CHEMICAL SEDIMENT TYPE DEPOSITS
- a) Sulphide facies iron formation
- b) Oxide facies iron formation
- c) Carbonate facies iron formation
- d) Silicate facies iron formation
- e) Other chemical sediments

VEIN TYPE DEPOSITS
- a) Single vein
- b) Multiple veins or lenses
- c) Stockwork

MAGMATOGENIC TYPE DEPOSITS ASSOCIATED WITH MAFIC/ULTRAMAFIC ROCKS
- a) Disseminated
- b) Layered
- c) Net textured
- d) Podiform

DEPOSITS WITH PORPHYRY AFFINITIES
PEGMATITE TYPE DEPOSITS
CLASTIC SEDIMENT TYPE DEPOSITS
REPLACEMENT TYPE DEPOSITS
DISSEMINATED MINERALIZATION - NOT CLASSIFIED

Host Rocks:

In general, this description refers to the immediately underlying and overlying rock types. When a number of rock types are present in an extensive zone of mineralization, the most common rock types are indicated.

Elements:

This description allows for a maximum of three metals present in increasing order of abundance by volume. The precious and base metals are indicated, if present, in preference to elements such as iron and carbon.

In some instances it has been more efficient on the map and in the report to make reference to an area of mineralization rather than individual deposits or occurrences. All mineralization in the area delineated by a dotted line on the map is referenced in the report under the location number within that area.

FORMAT OF MINERAL DEPOSIT REPORTS

Location:

Each deposit or occurrence description will contain the unique deposit reference number, deposit or claim name where applicable, UTM coordinates, general area description, the reference number of the airphoto on which the deposit can be located and a brief description of method(s) of access. For those localities that were difficult to locate in the field the airphotos with locations are reproduced in appendix A.

Exploration History:

This section provides an idea of the extent of exploration. In general, it is a precis of the Mineral Inventory Card and the reader should reference the Mineral Inventory Card for further details.

Geological Setting:

In this section the general geology of a deposit or occurrence is described. The information levels of the descriptions vary considerably and are dependent largely upon the extent of geological mapping during the documentation project. For further details the reader should consult the references cited.

Mineralization:

A detailed description of the mineralization provides the readers with the opportunity to make their own evaluation of the significance of a mineral occurrence or deposit.

Geochemistry:

Assay and geochemical data are included in this section. Extensive geochemical data bases are referenced but not reproduced here.

Classification:

In this section the geologist may indicate the reasons for the classification appearing on the Mineral Deposit Map. For those localities containing more than one deposit type the deposit types not shown on the map are also documented.

References:

These include both published and unpublished sources. For published and assessment report information the reader should obtain desired material directly from the source. The mineral deposit geologists will endeavour to supply copies of unpublished material on a deposit by deposit basis.

Abbreviations:

H.B.E.D.	Hudson Bay Exploration and Development Company Limited
H.B.M.&.S.	Hudson Bay Mining & Smelting Company Limited
A.F.	Assessment File
E.M.	electro-magnetic
M.I.	Mineral Inventory

NOTE: The Mineral Deposit report and the accompanying map are intended to be active documents that can be updated as new information becomes available. Although revisions of the publication are anticipated, any additional unpublished information may be obtained by contacting the authors or the Director, Geological Services Branch.

GENERAL GEOLOGY OF AREA 63K/13N

The geological base for this mineral deposit map sheet (MDS Map No. 3, 1988) is based on the one inch to one mile geological maps of Bateman and Harrison (1945), and the reconnaissance studies of McRitchie (1986), Zwanzig (1984) and Froese and Gall (1981). The southern part of the map area is underlain by volcanic rocks of the Amisk Group and the northern part of area is underlain by rocks of the Kisseynew metasedimentary gneiss belt.

In the Wabishkok Lake area the Amisk volcanic rocks consist mainly of mafic pillowed flows, mafic volcaniclastic rocks, small gabbroic and quartz-feldspar intrusions and several granitoid intrusions. Adjacent to and south of the Kisseynew gneissic rocks, the fine grained amphibolitic rocks are probably derived from Amisk volcanic rocks (Bateman and Harrison, 1945).

The Kisseynew gneisses in the map area consist mainly of magnetite-bearing quartzofeldspathic gneisses and migmatite and greywacke-derived psammitic and semi-pelitic gneisses and related migmatites (McRitchie, 1986).

Amphibolites are common throughout the Kisseynew gneisses. McRitchie (1986) identified three amphibolite types, namely: 1) a unit consisting of garnet amphibolite, feldspar-phyric metabasalt and fine grained amphibolite interlayered with siltstone; 2) a unit of garnet amphibolite and a calcareous diopside-hornblende-bearing amphibolite; and 3) a garnet-hornblende-feldspar amphibolite.

Granodioritic intrusions and granitoid gneisses that range in composition from pink alaskite and monzogranite to grey granodiorite and contain quartzofeldspathic gneisses (paragneiss) form several domal structures in the map area (Froese and Gall, 1981; McRitchie, 1986).

Several mafic intrusions occur in the map area. The 1 x 2 km body at Imperial Lake contains a core of fresh and unaltered ophitic gabbro, norite and gabbronorite with local gabbro, pegmatite and coarse grained layered pyroxenite and peridotite. The core rocks are enclosed by a 120 m wide discontinuous metamorphic shell of garnet- and hornblende-bearing metagabbro (McRitchie, 1986).

The recognition of amphibolite derived from metabasalt in the Weasel Bay area (McRitchie, 1986) indicates that there is a potential for the Kisseynew gneisses in this area to contain gold mineralization; there appears to be a close spatial relationship between gold mineralization and volcanic-derived amphibolites in the Puffy Lake-Nokomis Lake and Evans Lake areas (G. Ostry, 1986; and pers. comm. 1987).

Although only barren sulphide strata have been found to date in the Wabishkok Lake area, indications in the drill logs of weak alteration effects are tentatively interpreted as the signature of synvolcanic hydrothermal alteration. This area has the potential to contain volcanogenic massive sulphide deposits as well as structurally controlled gold mineralization.

REFERENCES

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Gale, G.H. and Eccles, D.R.
1988a: Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan Lake area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1.
1988b: Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2.

Froese, E. and Gall, Q.
1981: Geology of the eastern vicinity of Kisseynew Lake, Manitoba; in Current Research, Part A, Geological Survey of Canada, Ottawa, Paper 81-1A, p. 311-313.

McRitchie, W.D.
1986: Kisseynew Project: Geological reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

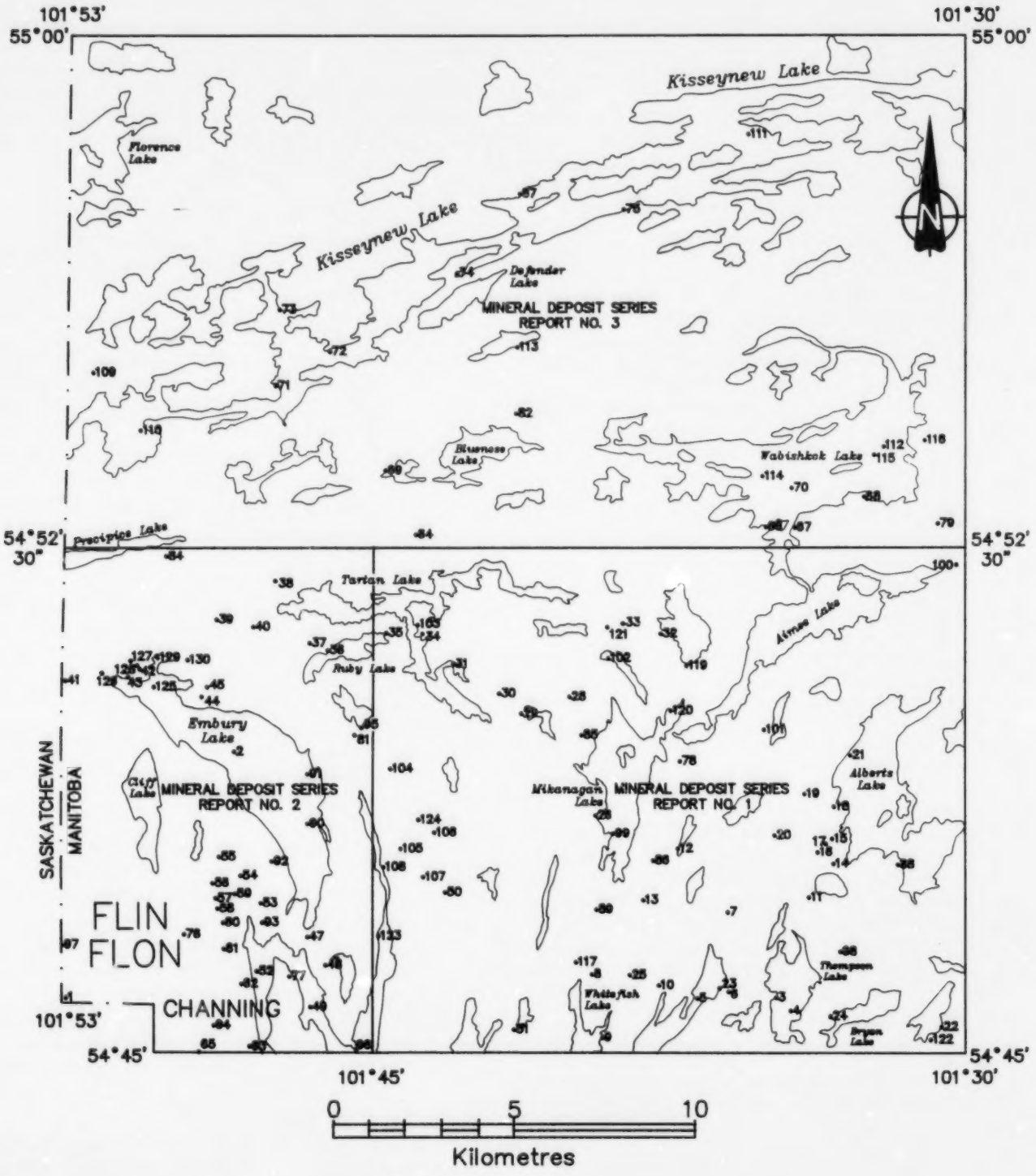
Ostry, G.
1986: Mineral investigations in the Kisseynew gneiss terrain; Manitoba Energy and Mines, Report of Field Activities 1986, p. 100-106.

Tanton, T.L.
1941: Flin Flon, Map 632A, one inch equals one mile; Geological Survey of Canada, Ottawa.

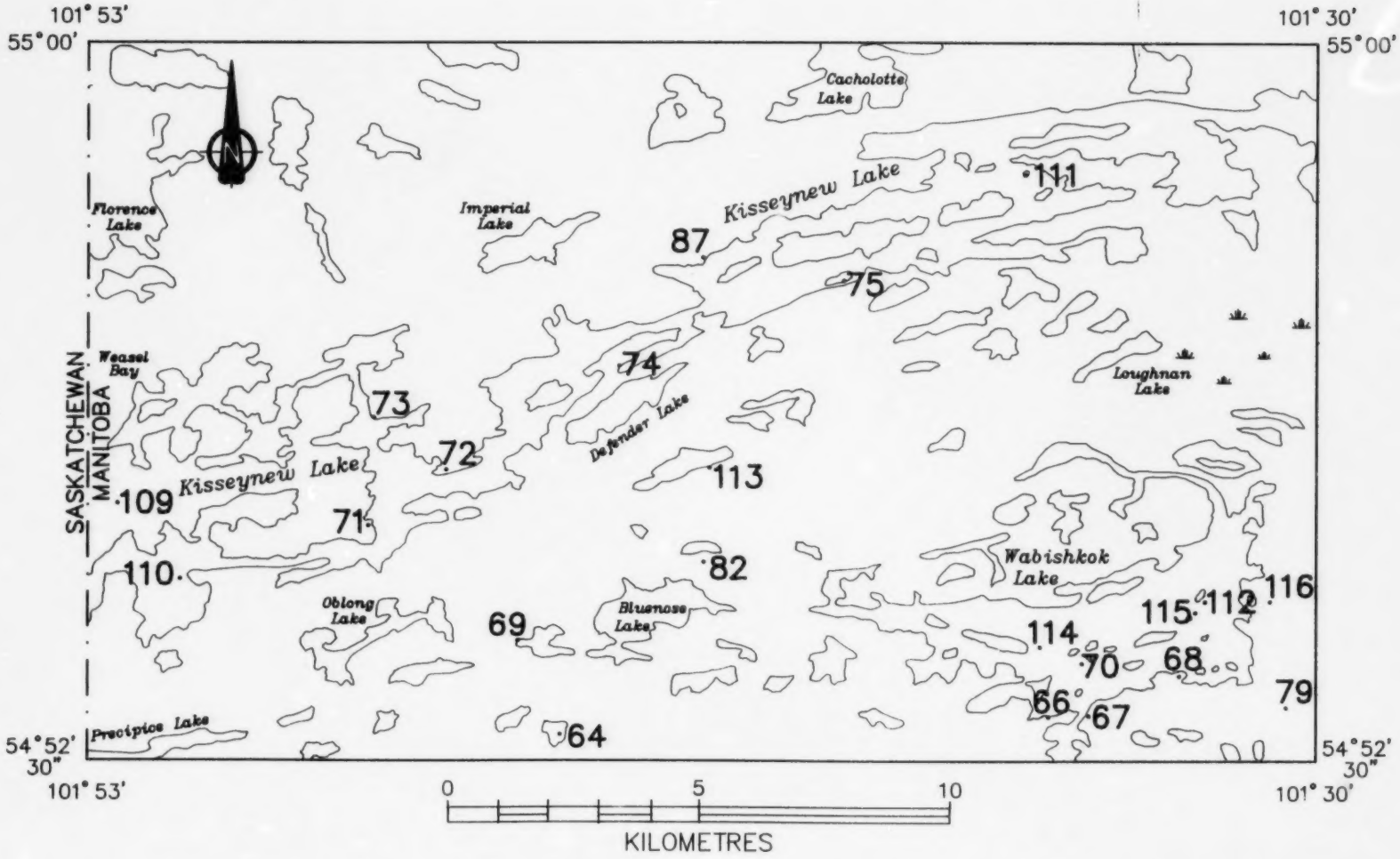
Zwanzig, H.V.
1983: Kisseynew Project: Lobstick Narrows, Manitoba; Energy and Mines, Mineral Resources Division, Report of Field Activities, 1983, p. 15-22.

Zwanzig, H.V. and Seneshen, D.M.
1984: Lobstick Narrows-Cleunion Lake; Manitoba Energy and Mines, Geological Survey, Preliminary Map 1984K-1, 1:20 000.

INDEX MAPS: LOCATION OF MINERAL DEPOSITS AND OCCURRENCES (63K/13 AND 63K/13N)



Index Map 1: Mineral Deopsits and Occurrences in the Flin Flon Area, NTS 63K/13.



Mineral Deposits and Occurrences in the Flin Flon Area 63K/13N.

MINERAL DEPOSITS AND OCCURRENCES; WEASEL BAY AND DEFENDER LAKE AREA

LOCATION: 64 NAME:
UTM: 6084345N/324653E AREA: 1.6 km south of Bluenose Lake AIRPHOTO: A26397-159

ACCESS:

Via plane to Bluenose Lake and traverse.

EXPLORATION SUMMARY:

Granges Exploration carried out an E.M. survey and drilled one hole (58 m) to intersect two of three conductors.

GEOLOGICAL SETTING:

The area is shown to be underlain by intermediate volcanic rocks and a felsic intrusion (Bateman and Harrison, 1945). The drill record indicates conglomerate, massive interbedded quartzite and chert (A.F. 92169).

MINERALIZATION:

The drill hole intersected 15 cm and 40 cm thick sections of near solid pyrrhotite and two sections of 4 m and 3 m thickness containing bands of near solid pyrrhotite.

GEOCHEMICAL DATA:

The highest values in eight assays were: 0.05% Cu and 0.04% Zn.

CLASSIFICATION:

Sulphide facies iron formation.

REFERENCES:

Assessment File 92169
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

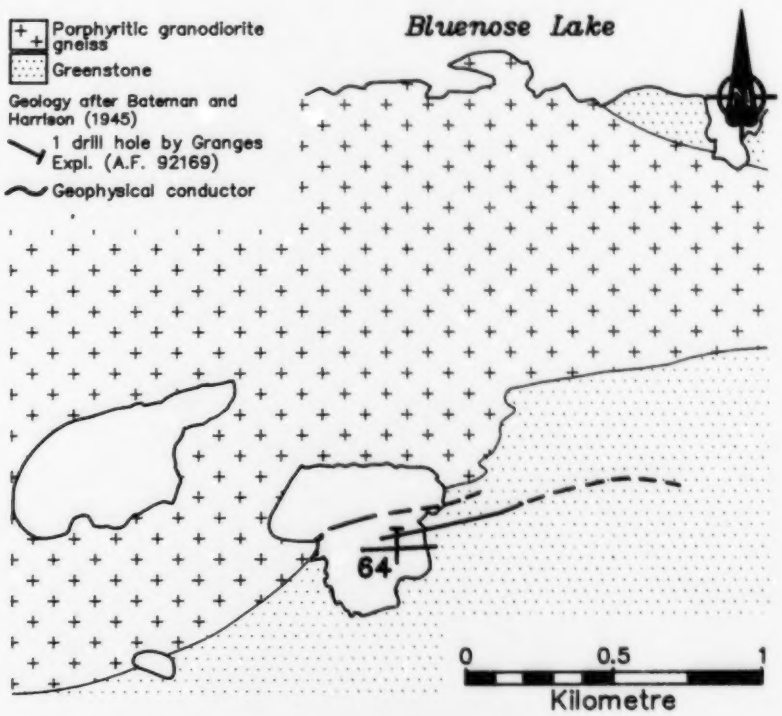


Figure 64–1: Geological setting of occurrence #64 (63K/13N).

LOCATION: 66 NAME:
UTM: 6084185N/334183E AREA: Southern narrows of Wabishkok Lake AIRPHOTO: A26364-166, A26328-23

ACCESS:

Via Aimée Lake Road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

The property was first staked and trenched in 1928 by D. Austin and L.D. Baxter. These early pits were cleaned out and sampled when H.B.E.D. optioned claim G.A.6 in 1948. In 1949, Northern Exploration Syndicate optioned the property and drilled two short holes totalling 146 m (M.I. Card 63K/13 PYR 5). The claim was restaked in 1977 by H.B.E.D. A 2 x 1 x 1.5 m trench was located within 2 m of the shoreline in 1981.

GEOLOGICAL SETTING:

Bateman and Harrison (1945) noted a thick assemblage of greenstones that extend from Wabishkok Lake to Tartan Lake, and south to Aimee Lake and Mikanagan Lake. The greenstone unit is dominantly altered amygdaloidal pillow lava with small amounts of interbedded pyroclastic rocks and irregular masses of amphibolitized gabbro.

MINERALIZATION:

Less than 10% pyrite in mafic schist with abundant quartz veins. Crenulation folds in schists.

GEOCHEMICAL DATA:

Maximum assays of 0.33% Cu, 0.20% Zn with 1.37 g/tonne Au were reported by Northern Exploration Syndicate Corp. (see M.I. Card 63K/13 Pyr 5).

CLASSIFICATION:

Disseminated pyrite in mafic schists with quartz vein mobilizate in tension fractures.

REFERENCES:

Bateman, J.D. and Harrison, J.M.

1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

1945: Mikanagan Lake map area (Descriptive Notes), Geological Survey of Canada, Paper 44-22, p. 1, 2.

Mineral Inventory Card 63K/13 PYR 5
Manitoba Energy and Mines.

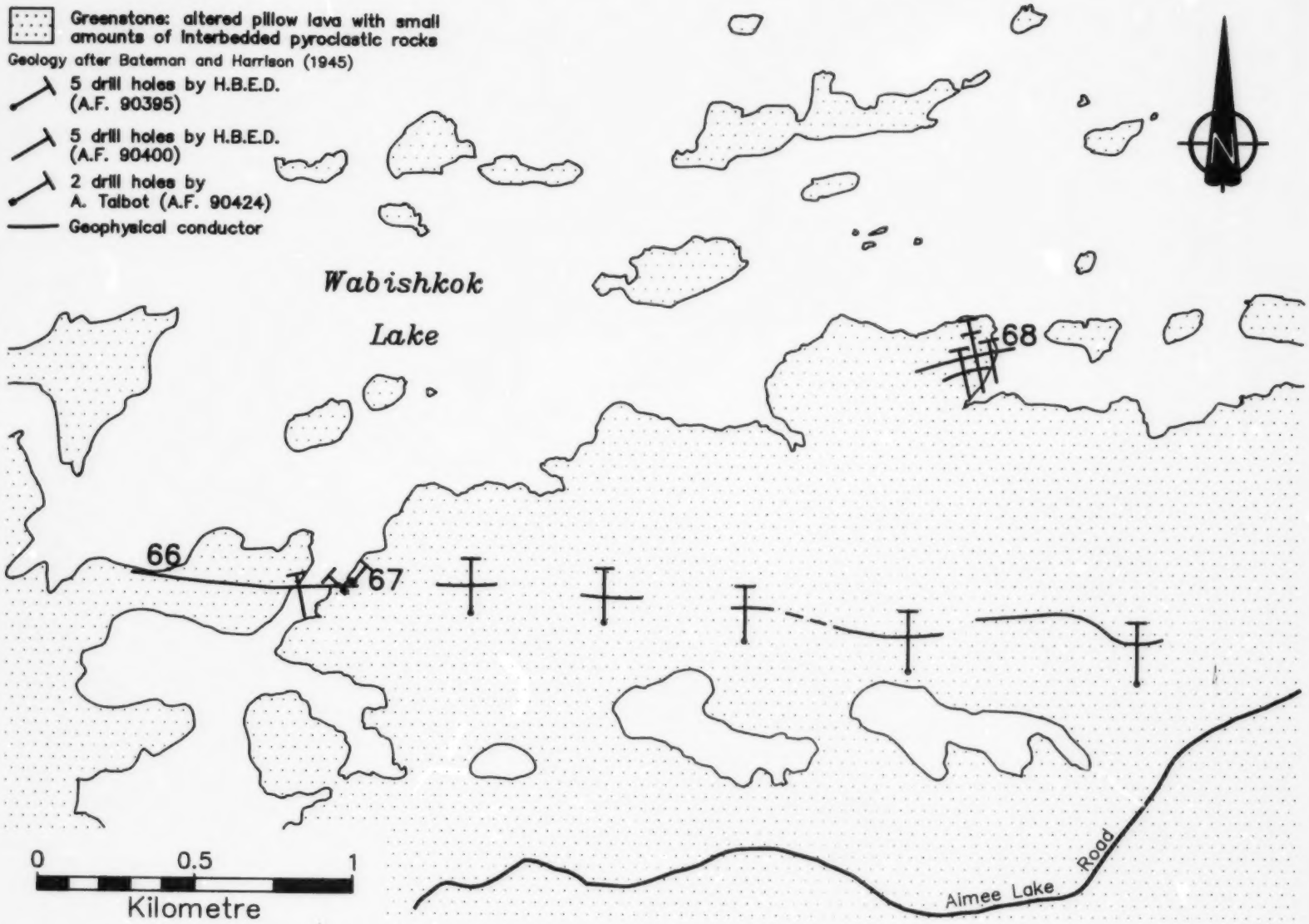


Figure 66–1: Geological setting of occurrences 66, 67 and 68 (63K/13N).

LOCATION: 67 NAME:
UTM: 6084142N/334980E AREA: Southern narrows of Wabishkok Lake (see Fig. 66-1) AIRPHOTO: A26364-166

ACCESS:

Via Aimee Lake Road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

A. Talbot and G.F. Thompson drilled two holes totalling 123 m on G.A. #3 in 1948. In 1951, H.B.E.D. optioned the area and tested geophysical conductors with six holes totalling 1200 m (see Fig. 66-1).

GEOLOGICAL SETTING:

The area is underlain by a thick assemblage of mafic volcanic rocks (Bateman and Harrison, 1945). An E.M. conductor with a strike length of several kilometres indicates an east-west strike in the general vicinity of the mineral occurrence (Fig. 66-1).

MINERALIZATION:

A 3 x 3.5 x 2 m trench on the east shore of a narrow bay is visible from the lake (Fig. 67-1). The southward-dipping mafic schists with less than 10% pyrite overlie a 60 cm thick layer of massive silicic (cherty?) rocks with 20% pyrite that contains a 15 cm thick layer of black schist with 30% pyrite and minor(?) graphite. The drilling by A. Talbot and G. Thompson (A.F. 90424) intersected 3 m of chlorite schist with 25% pyrrhotite plus pyrite, 3 m of dacite with 50% pyrrhotite plus pyrite and quartz stringers and abundant 'dacite'. Drilling by H.B.E.D. (A.F. 90395) encountered several short sections (less than 1 m thick) of siliceous chlorite schist with pyrrhotite and pyrite interspersed with andesitic and gabbroic rocks in the vicinity of the trench. One of the holes drilled on the conductor east of the trench contained 30 cm of solid pyrrhotite, the remaining holes contain minor to disseminated pyrite and pyrrhotite in dacitic and andesitic rocks (A.F. 90400).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Disseminated sulphide and graphite-bearing silicic stratum. Notations of dacitic rocks in drill cores could be an indication of extensive silicification.

REFERENCES:

Assessment Files 90395, 90400, 90424
Minerals Division, Manitoba Energy and Mines.

Bateman, J.D. and Harrison, J.M.

1945: Mikanagan Lake Map area (Descriptive Notes); Geological Survey of Canada, Paper 44-22, p. 1, 2.

1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Mineral Inventory Card 63K/13 PYR 5
Manitoba Energy and Mines.

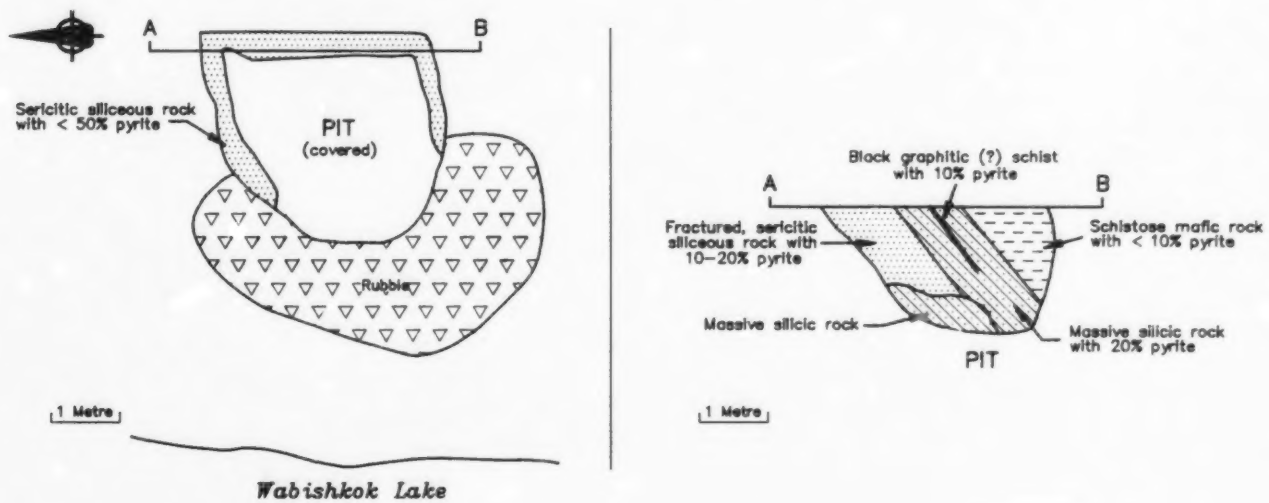


Figure 67–1: Location and cross section of pit at occurrence #67 (63K/13N).

LOCATION: 68 NAME:
UTM: 6084929N/336897E AREA: South shore of Wabishkok Lake (see Fig. 66-1) AIRPHOTO: A26398-56

ACCESS:

Via Aimée Lake Road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

Sulphide occurrence shown by Bateman and Harrison (1945). H.B.E.D. blasted two small trenches and drilled four holes totalling 919 m on Tad 3 in 1951 (see Fig. 68-1).

GEOLOGICAL SETTING:

The region is underlain by a thick assemblage of greenstone, composed of altered amygdaloidal pillow lava with small amounts of interbedded pyroclastic rocks (Bateman and Harrison, 1945). The area of drilling is underlain by medium grained gabbro, andesite and biotite-chlorite schists.

MINERALIZATION:

H.B.E.D. drill hole 17 intersected 1.5 m of slight to well mineralized pyrrhotite with pyrite and trace chalcopyrite in siliceous chloritic andesite schists adjacent to a 75 cm thick quartz vein. Drill hole 18 core contained 30 cm of very well mineralized pyrrhotite in siliceous graphitic chlorite schists. Quartz-feldspar porphyry, quartz veins, and siliceous chlorite ± sericite schists were noted in a number of places throughout the cores.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Disseminated sulphide mineralization in veins of altered and sheared intermediate volcanic rocks.

REFERENCES:

Assessment File 90395
Minerals Division, Manitoba Energy and Mines.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

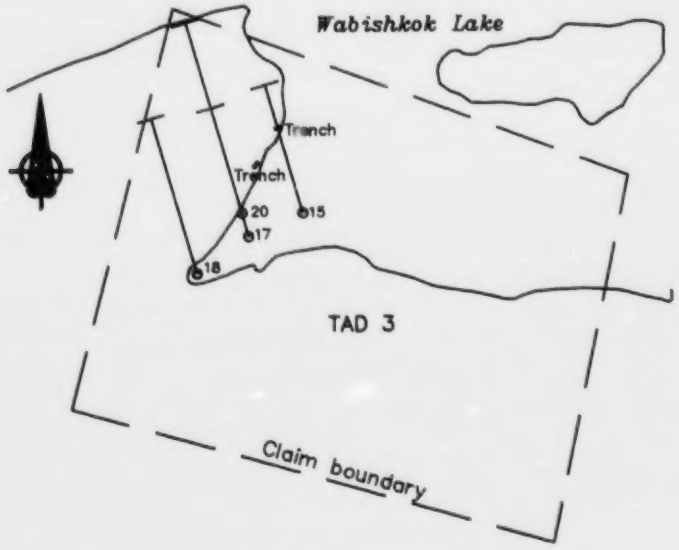


Figure 68–1: Drill hole and trench locations at occurrence #68 (63K/13N).

LOCATION: 69
UTM: 6086139N/323875E

NAME:
AREA: West end of Bluenose Lake (Fig. 69-1)

AIRPHOTO: A26397-160

ACCESS:
Via plane from Fiin Flon.

EXPLORATION SUMMARY:
Sulphide occurrence indicated by Bateman and Harrison (1945). One trench (3.5 x 2 x 0.5 m) was located near the shoreline (Fig. 69-2).

GEOLOGICAL SETTING:
The area is underlain by biotite metadiorite and

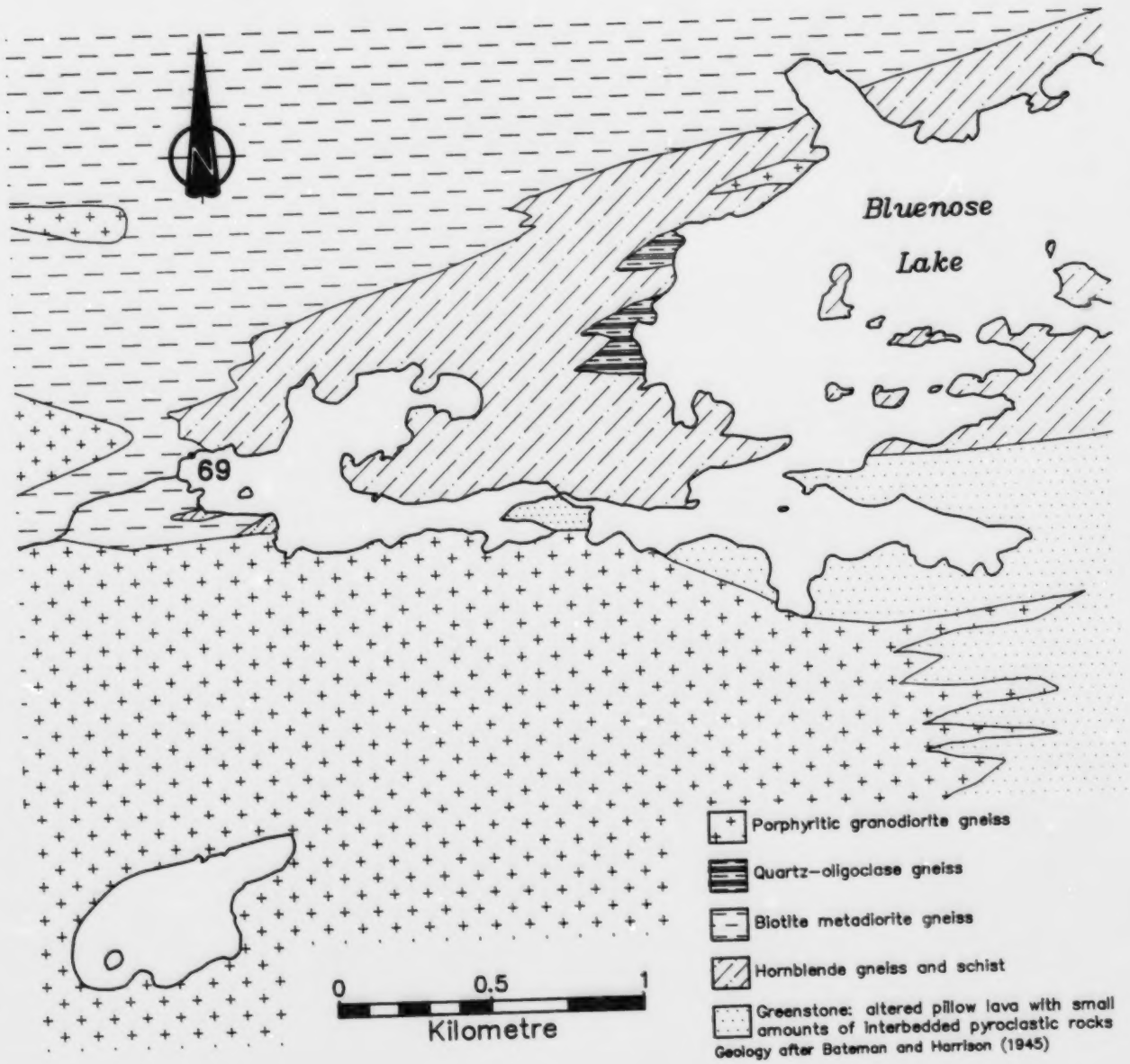


Figure 69–1: Geological setting of occurrence #69 (63K/13N).

hornblende-rich gneisses and schists derived from mafic to intermediate volcanic rocks (Bateman and Harrison, 1945).

MINERALIZATION:

Silicified mafic volcanic rocks(?) with hornblende-rich layers contain 2% disseminated pyrrhotite and pyrite.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Disseminated mineralization. Insufficient information to classify; may represent a zone of silicification in the gneissic rocks.

REFERENCES:

Bateman, J.D. and Harrison, J.M.

1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

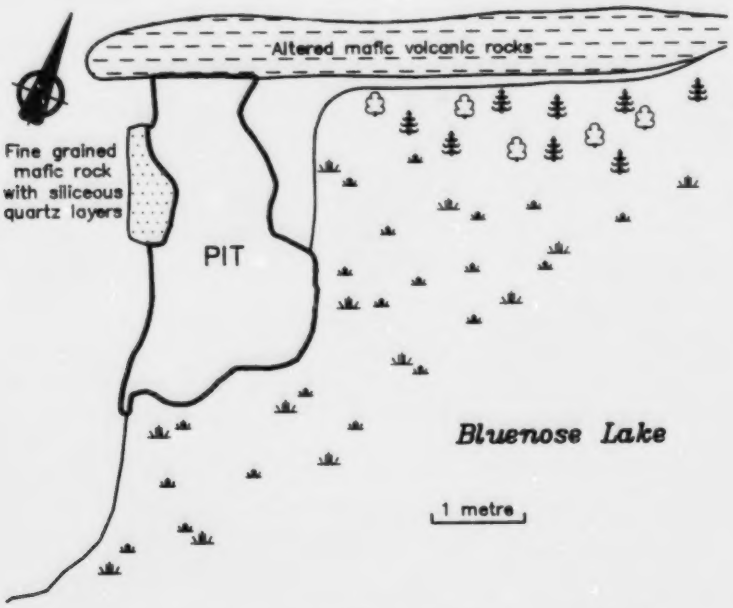


Figure 69–2: Detailed geology, and pit location at occurrence #69 (63K/13N).

LOCATION: 70
UTM: 6085233N/334937E

NAME:
AREA: Central Wabishkok Lake

AIRPHOTO: A26398-55

ACCESS:

Via Aimée Lake Road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

H.B.E.D. drilled 14 drill holes totalling 3188 m on the Tad and Nod claims in 1951.

GEOLOGICAL SETTING:

The area is underlain by an assemblage of altered amygdaloidal pillow lava, interbedded pyroclastic rocks and irregular masses of intrusive amphibolite (Bateman and Harrison, 1945). H.B.E.D. drill indicate report abundant siliceous hornblende- and/or chlorite-rich andesite and schist.

MINERALIZATION:

Near solid to solid sulphides were recorded in drill core from 12 of 14 holes drilled to test four conductors. Drill hole 21 intersected 1 m of solid pyrrhotite and pyrite in hornblende- and biotite-rich chloritic andesite. Hole 8 intersected nearly solid pyrrhotite and visible chalcopyrite in chlorite schist. Mineralization was noticeably greater at the contact margins of the andesite and quartz-feldspar porphyry (holes 2, 3 and 21) and "intrusive amphibolite" (holes 1, 8, 12 and 14).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Pyrrhotite strata.

REFERENCES:

Assessment File 90395
Minerals Division, Manitoba Energy and Mines

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

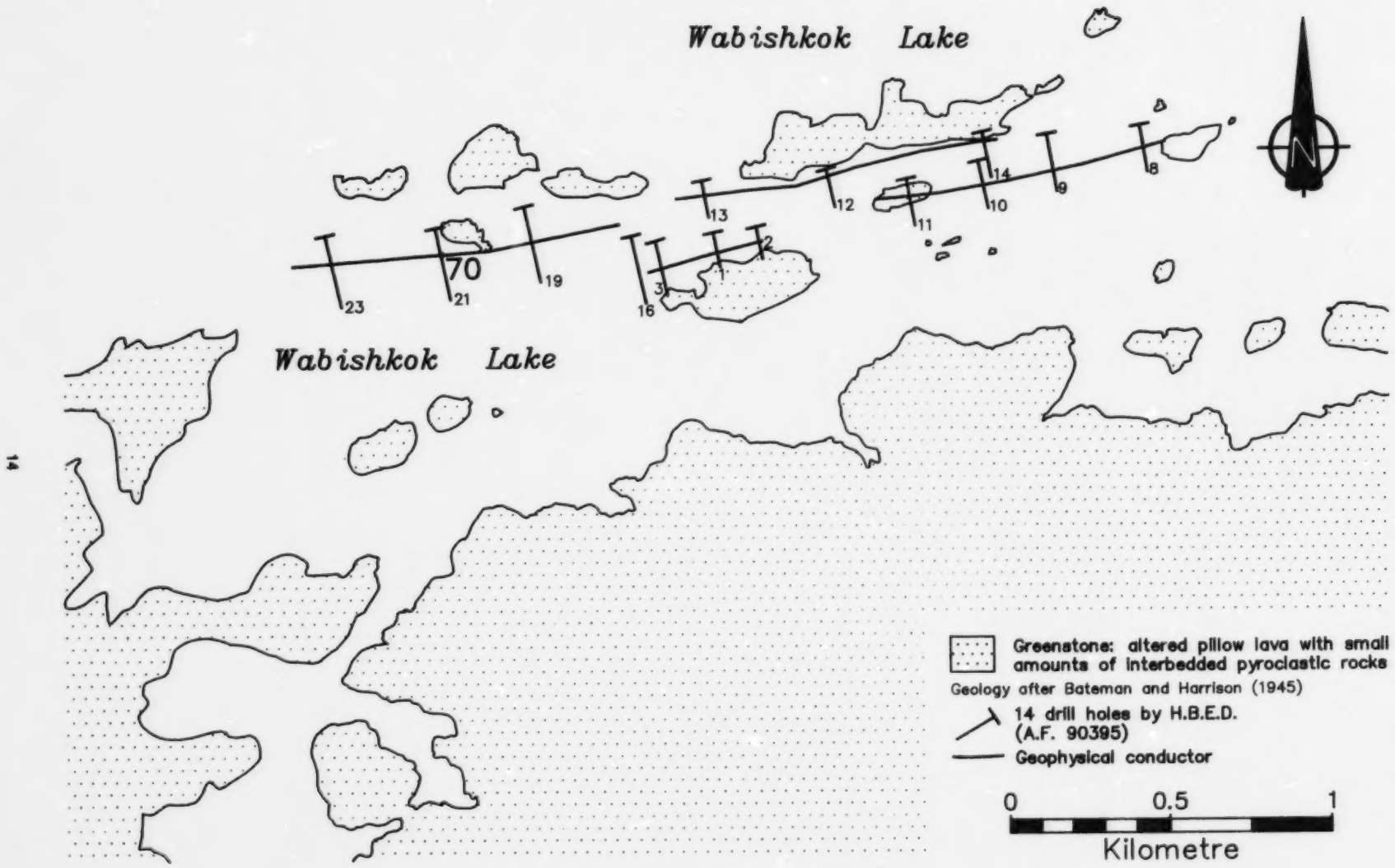


Figure 70–1: Geological setting of occurrence #70 (63K/13N).

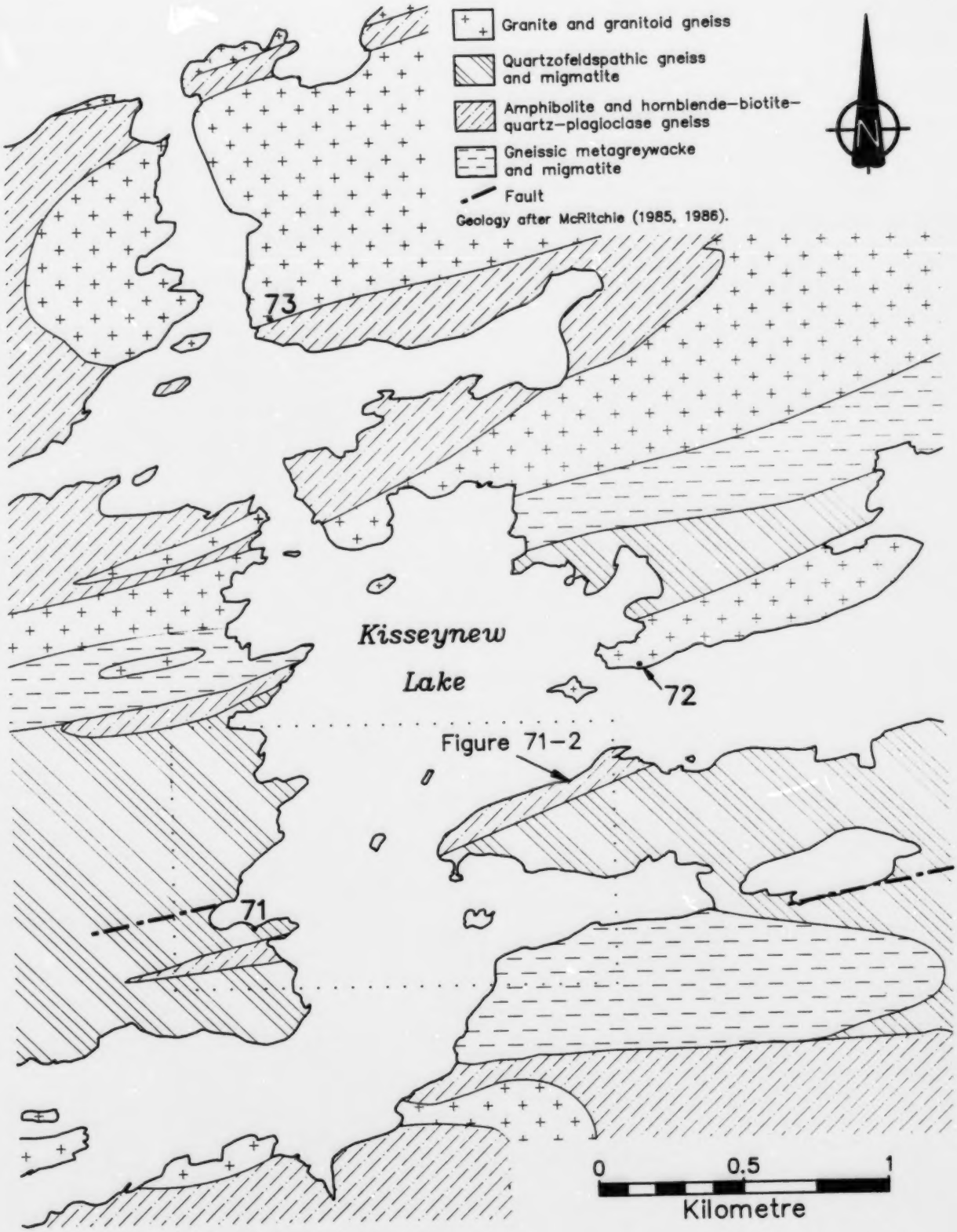


Figure 71–1: Geological setting of occurrences 71, 72 and 73 (63K/13N).

LOCATION: 71
UTM: 6088567N/320967E

NAME:
AREA: North central Kisseynew Lake, approximately 2.25 km north of Oblong Lake

AIRPHOTO: A26397-215

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

Pyrite occurrence indicated by Tanton (1941). One trench (2 x 1.5 x 1 m) was located at the edge of lake. Three small trenches (Fig. 71-2) were found along strike to the east (McRitchie, 1985).

GEOLOGICAL SETTING:

The area is underlain by quartzofeldspathic paragneiss and amphibolite (McRitchie, 1985).

MINERALIZATION:

Solid sulphides, mostly pyrrhotite with minor pyrite and chalcopyrite, occur in a 0.5-1.0 m layer in association with amphibolitic rocks at the locality shown. The three trenches east of location 71 (Fig. 71-2) contain moderate amounts of pyrrhotite (30-40%) and minor pyrite.

GEOLOGICAL DATA:

None.

CLASSIFICATION:

Sulphide stratum.

REFERENCES:

McRitchie, W.D.

1985: Kisseynew Project: Geological Reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Report of Field Activities 1985, p. 57-63.

1986: Kisseynew Project: Geological reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

Tanton, T.L.

1941: Flin Flon, Map 532A, one inch equals one mile; Geological Survey of Canada, Ottawa.

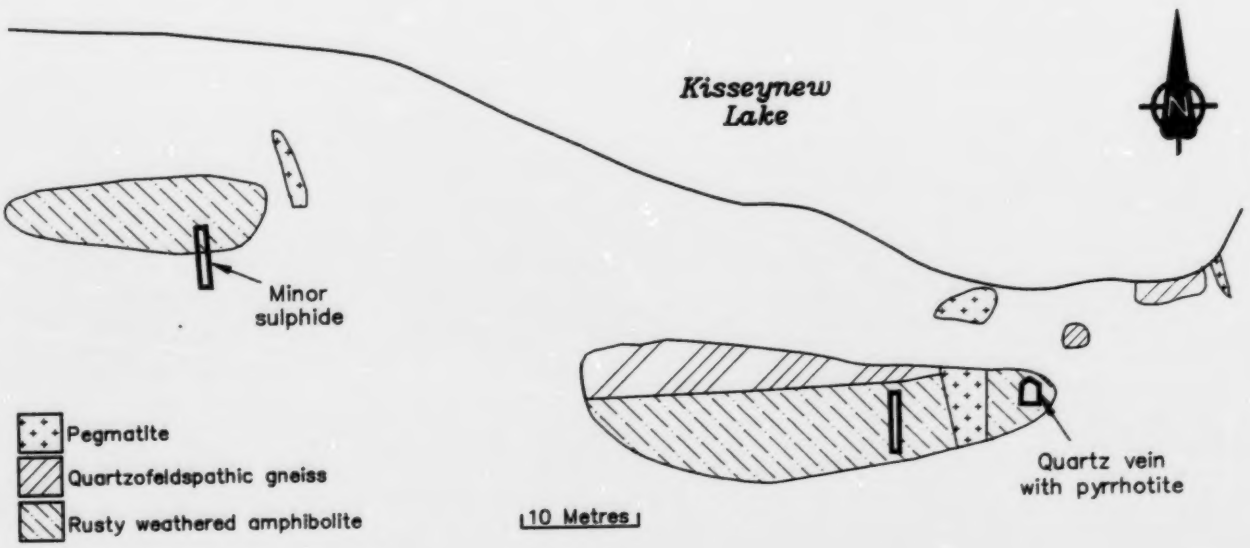


Figure 71–2: Detailed geology and trench locations of occurrence #71 (63K/13N).

LOCATION: 72
UTM: 6089464N/322495E

NAME:

AREA: North central Kisseynew Lake, approximately 2.25 km north of the east end of Oblong Lake (see Fig. 71-1).

AIRPHOTO: A26364-161

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

Pyrite occurrence indicated by Tanton (1941). One trench (4.5 x 3 x 2 m) was located 10 m north of the shoreline. The property was first staked as the Ella group prior to 1930.

GEOLOGICAL SETTING:

Underlain by tonalitic-granodioritic hornblende-bearing orthogneiss (McRitchie, 1986, Fig. 71-1).

MINERALIZATION:

The trench was blasted on a 0.5 m thick quartz vein that contained 1% pyrite and minor graphite. Garnet-biotite gneiss and biotite-chlorite schist are adjacent to the quartz vein (Fig. 72-1).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Quartz vein in micaceous gniess.

REFERENCES:

McRitchie, W.D.
1986: Kisseynew Project: Geological reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

Tanton, T.L.
1941: Flin Flon, Map 632A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Mineral Inventory Card 63K/13NW PYR 4
Manitoba Energy and Mines, Minerals Division.

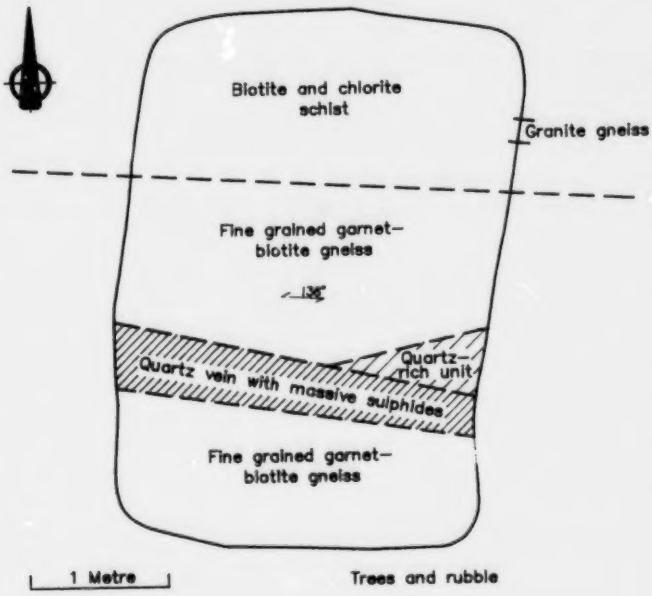


Figure 72–1: Detailed geology of trench at occurrence #72 (63K/13N).

LOCATION: 73
UTM: 6090651N/321149E

NAME:
AREA: North central Kisseynew Lake, approximately 4 km north of Oblong Lake (see Fig. 71-1).

AIRPHOTO: A26364-161

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

Pyrite occurrence indicated by Tanton (1941). Trenches were not located in 1984.

GEOLOGICAL SETTING:

The occurrence is probably located at the contact between garnet-bearing granitoid gneisses and garnet-hornblende-quartz-bearing granulite (McRitchie, 1986, Fig. 71-1).

MINERALIZATION:

Minor pyrrhotite and pyrite were found in all rock types in the area (W.D. McRitchie, pers. comm., 1988.).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Disseminated sulphide, not classified.

REFERENCES:

McRitchie, W.D.
1986: Kisseynew Project: Geological reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

Tanton, T.L.
1941: Flin Flon, Map 632A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Mineral Inventory Card 63K/NW Pyr4
Manitoba Energy and Mines, Minerals Division.

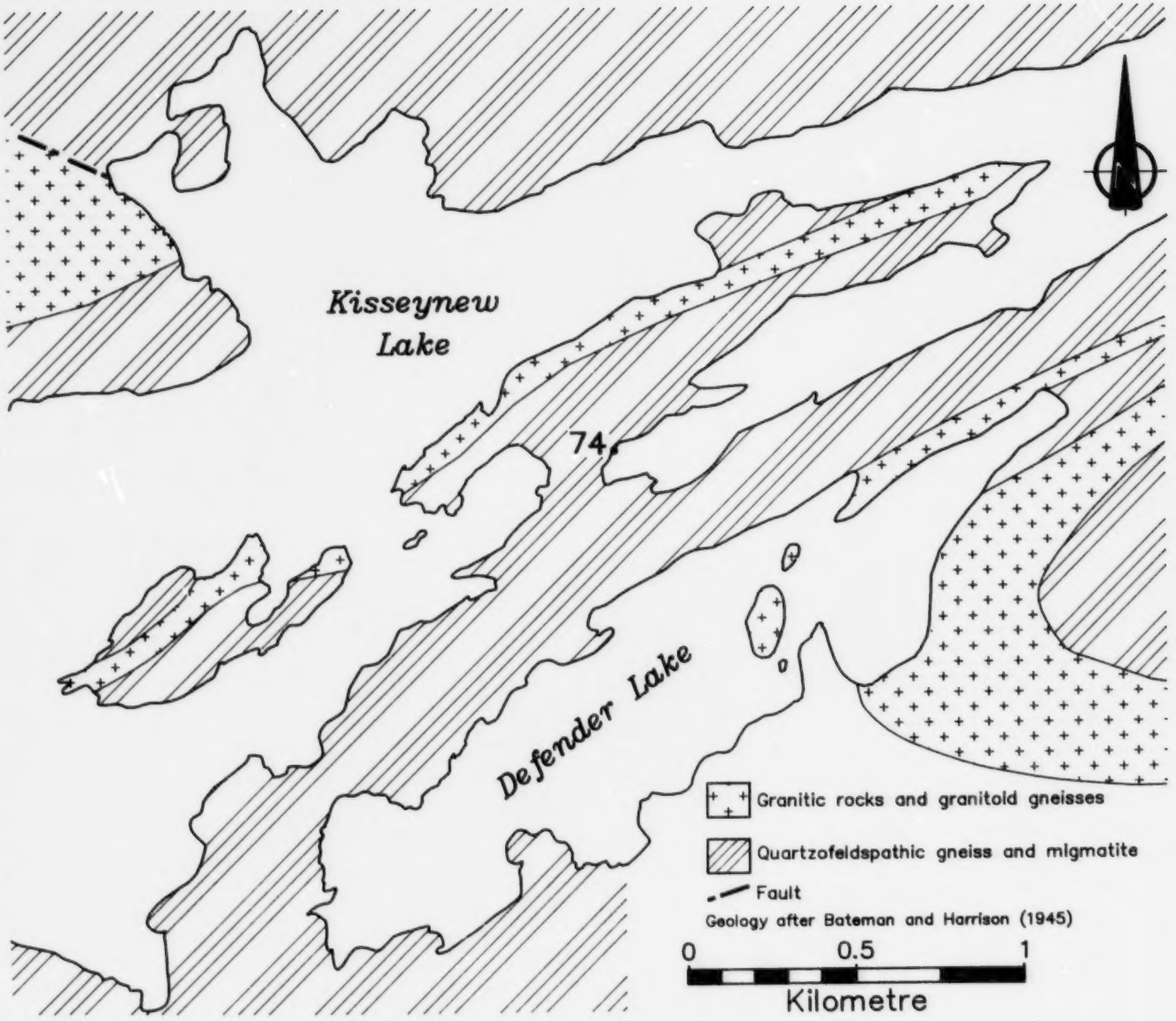


Figure 74–1: Geological setting of occurrence #74 (63K/13N).

LOCATION: 74 NAME:
UTM: 6091457N/326043E AREA: North Central Kisseynew Lake AIRPHOTO: A26397-108

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

An adit (1.7 x 2 x 8 m) was dug on the north shore of a small bay as shown on Bateman and Harrison's Geological map (1945). A trench (5 x 2.5 x 2 m) was located 100 m east of the adit.

GEOLOGICAL SETTING:

The occurrence is situated on the northwest margin of the elongated Defender Lake gneiss dome, which consists mainly of grey, medium grained, quartzofeldspathic gneisses and pink granitoid gneisses (Froese and Gall, 1981).

MINERALIZATION:

The adit intersects a quartz vein (083°/23°N) that appears to be concordant with the gneisses. The boudinaged vein is overlain by a black friable graphitic(?) layer. Samples of very fine grained, solid pyrrhotite with 1-5 cm quartz-sulphide blobs and minor malachite were removed from the adjacent rubble pile (Fig. 74-2).

The trench was blasted on a 1 m thick pyrrhotite-quartz rock intercalated with black "cherty" layers containing solid and disseminated pyrrhotite and pyrite. A siliceous gneiss with disseminated pyrite crystals and a 10 cm sericite schist underlie the sulphide layer.

GEOCHEMICAL DATA:

A sample of medium grained biotite-quartz-rich rock with yellow staining taken 1.5 m west of the adit contained less than 12 ppb Au. A trench sample of the siliceous gneiss also contained less than 12 ppb Au.

CLASSIFICATION:

Quartz veins and sulphide-bearing quartz-rich strata in quartzofeldspathic gneisses.

REFERENCES:

Bateman, J.D. and Harrison, J.M.

1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Froese, E. and Gall, Q.

1981: Geology of the eastern vicinity of Kisseynew Lake, Manitoba; in Current Research, Part A, Geological Survey of Canada, Ottawa, Paper 81-1A, p. 311-313.

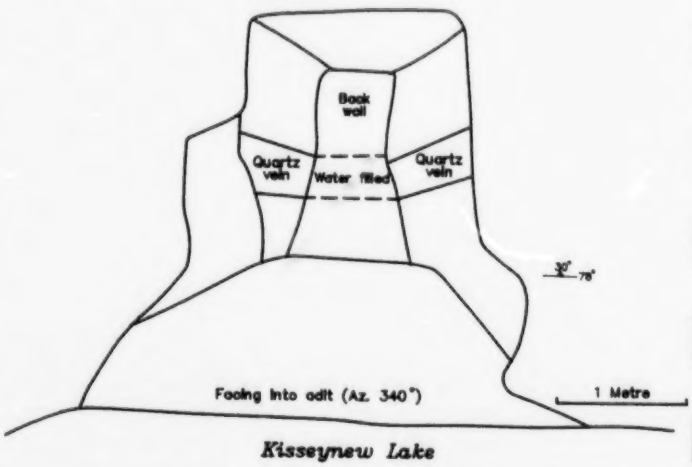


Figure 74–2: Detailed geology of adit at occurrence #74 (63K/13N).

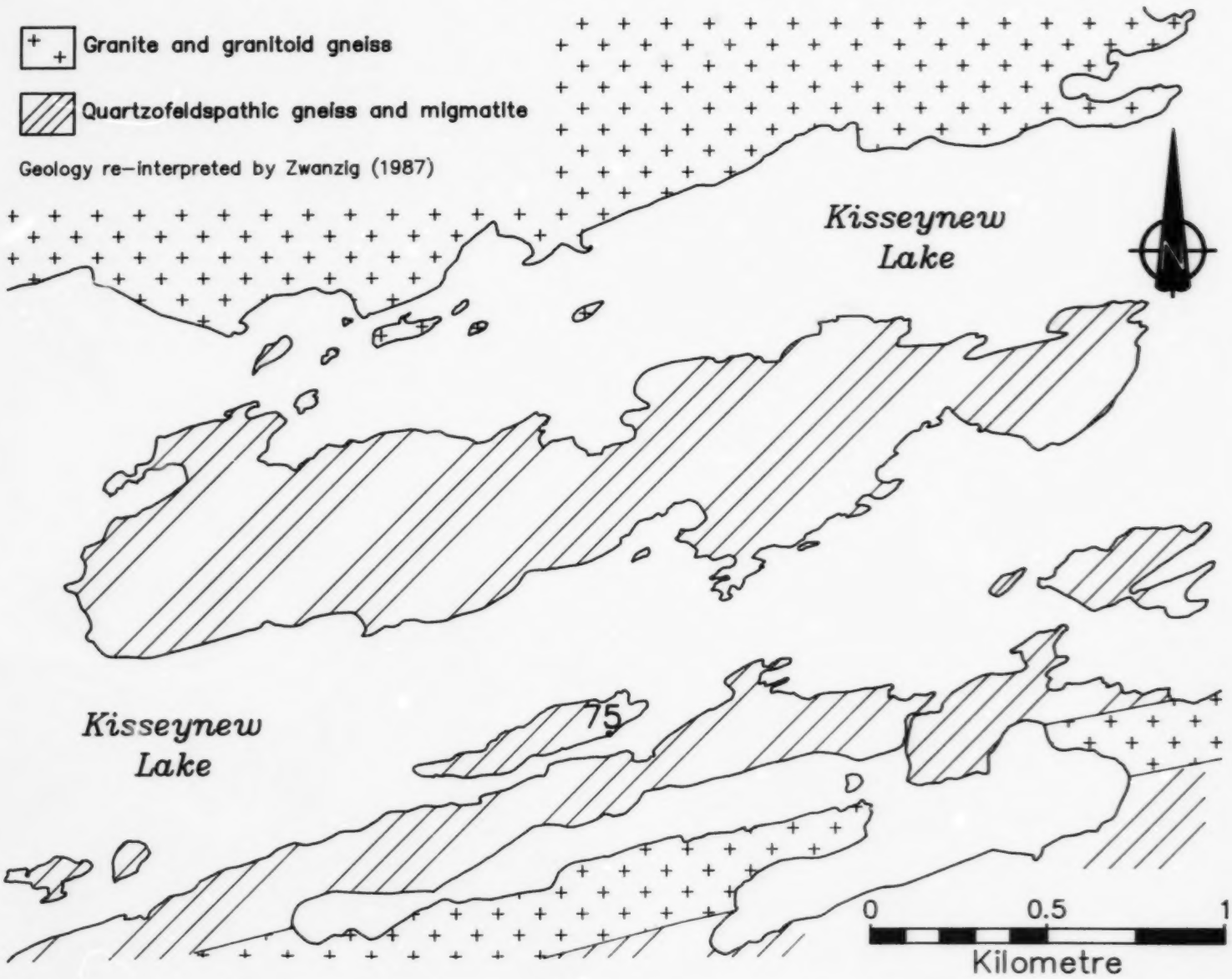


Figure 75-1: Geological setting of occurrence #75 63K/13N).

LOCATION: 75
UTM: 6093034N/330647E

NAME:
AREA: South shore of an elongate island in Kisseynew Lake, approximately 3.2 km south-southwest of Lobstick Bay

AIRPHOTO: A26328-216, A26328-158

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

Sulphide occurrence indicated by Bateman and Harrison (1945). One trench (4.5 x 2.5 m) was located 1.5 m east from the shoreline.

GEOLOGICAL SETTING:

Situated on the north margin of the elongate Defender Lake gneiss dome, which consists mainly of grey, medium grained, quartzofeldspathic gneisses and pink granitoid gneisses (Froese and Gall, 1981).

MINERALIZATION:

Pyrite-bearing quartz veins both concordant and discordant to micaceous quartz-garnet-muscovite-biotite gneisses. The largest vein is 0.3 m thick (Fig. 75-2).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Quartz veins in quartzofeldspathic gneiss.

REFERENCES:

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Froese, E. and Gall, Q.
1981: Geology of the eastern vicinity of Kisseynew Lake, Manitoba; in Current Research, Part A, Geological Survey of Canada, Ottawa, Paper 81-1A, p. 311-313.

Zwanzig, H.V. and Seneshen, D.M.
1984: Lobstick Narrows-Cleunion Lake; Manitoba Energy and Mines, Geological Services, Preliminary Map 1984K-1, 1:20 000.

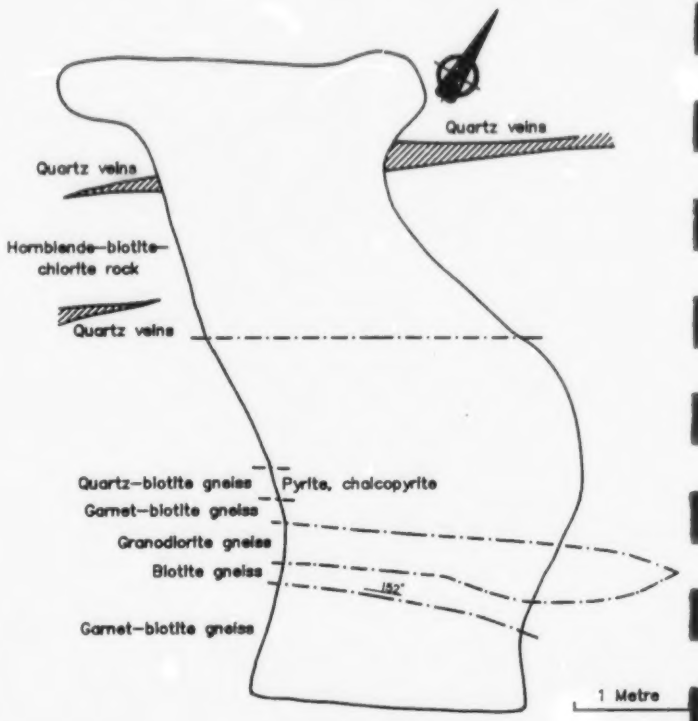


Figure 75–2: Detailed geology of trench at occurrence #75 (63K/13N).

LOCATION: 79 NAME:
UTM: 6084095N/338890E AREA: Adjacent to the Aimée Lake AIRPHOTO: A26398-104, A26330-270
Road approximately 1 km southeast of Wabishkok Lake

ACCESS:

Via Aimée Lake Road.

EXPLORATION SUMMARY:

H.B.E.D. drilled four holes totalling 681 m on the Nod claims in 1951. Several trenches have been blasted in the area during the past five years (see Fig. 79-2 and 79-3). An unidentified drill hole and a trench were found at location A (Fig. 79-1).

GEOLOGICAL SETTING:

The area is underlain by a thick assemblage of greenstone containing altered amygdaloidal pillow lava and interbedded pyroclastic rocks (Bateman and Harrison, 1945). The greenstones have been intruded by small bodies of quartz-feldspar porphyry and gabbro.

MINERALIZATION:

Drill core from hole 7 contained 80 cm of nearly solid sulphide and several intersections with well mineralized pyrrhotite in chlorite schist and graphitic chlorite-biotite schist. Near solid pyrrhotite and pyrite with minor graphite are exposed as a gently north-dipping sulphide stratum that is approximately 40 cm thick. Pyrrhotite-bearing sericite-chlorite schists contain veinlets and stringers of chalcopyrite and pyrite mobilizate (Fig. 79-2).

Minor disseminations and veinlets of pyrite occur in rusty weathering schists and quartz veins adjacent to a quartz-feldspar porphyry dyke (Fig. 79-3). Trace arsenopyrite occurs with quartz-carbonate veins adjacent to a gabbroic intrusion in the same area (Fig. 79-3).

At location A (Fig. 79-1) a 3 x 1 x 1 m trench contains near solid pyrrhotite, minor pyrite and trace chalcopyrite. An old drill set up 30 m west of a trench appears to have been drilled to test the sulphide mineralization in the trench.

GEOCHEMICAL DATA:

Assays of 2.1-4.1 g/tonne Au were obtained from samples of pyrite-bearing rocks from the area of Figure 79-3 (John Donald, pers. comm., 1988).

CLASSIFICATION:

Sulphide strata in sheared greenstone.

REFERENCES:

Assessment File 90395
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

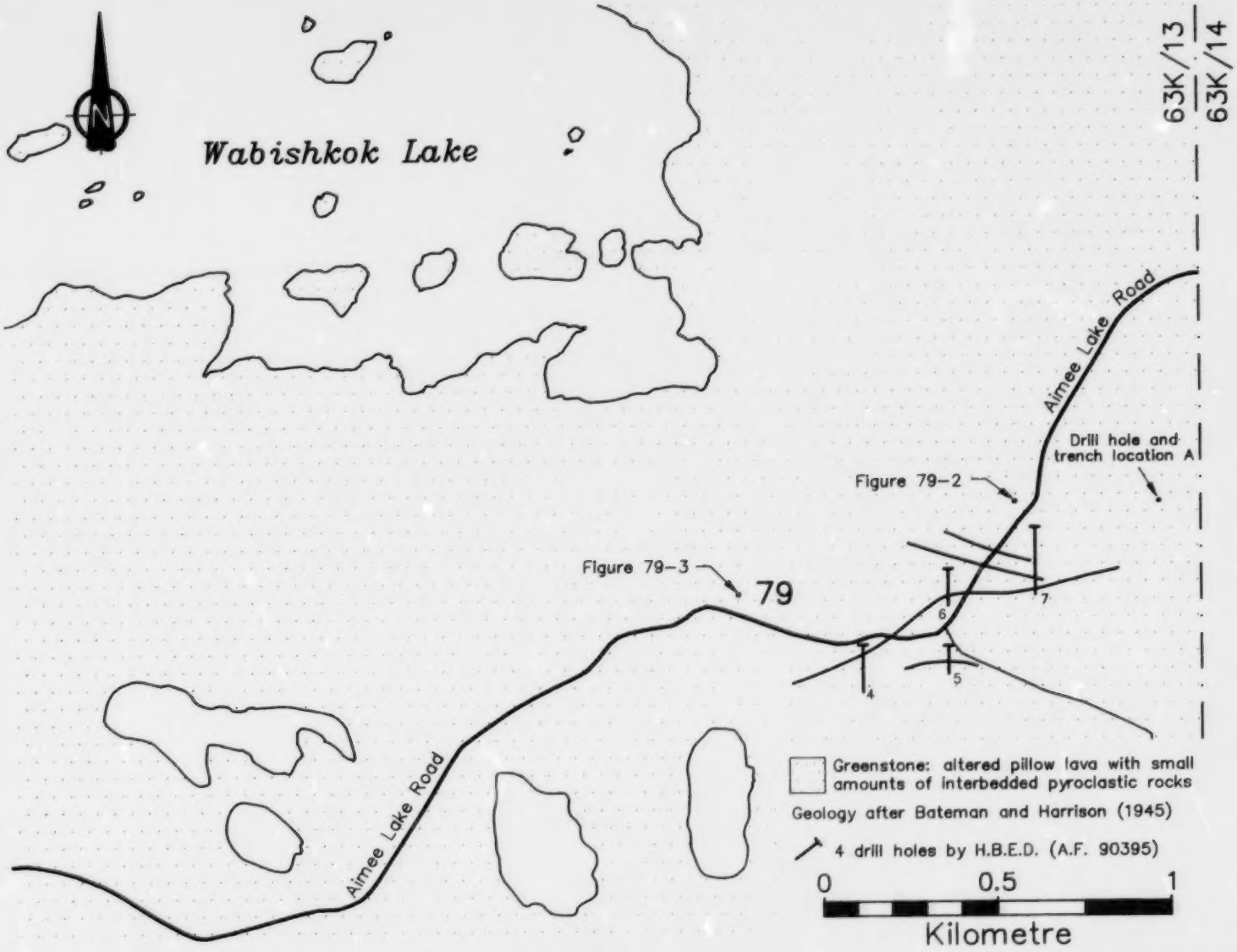


Figure 79–1: Geological setting of occurrence #79 (63K/13N).

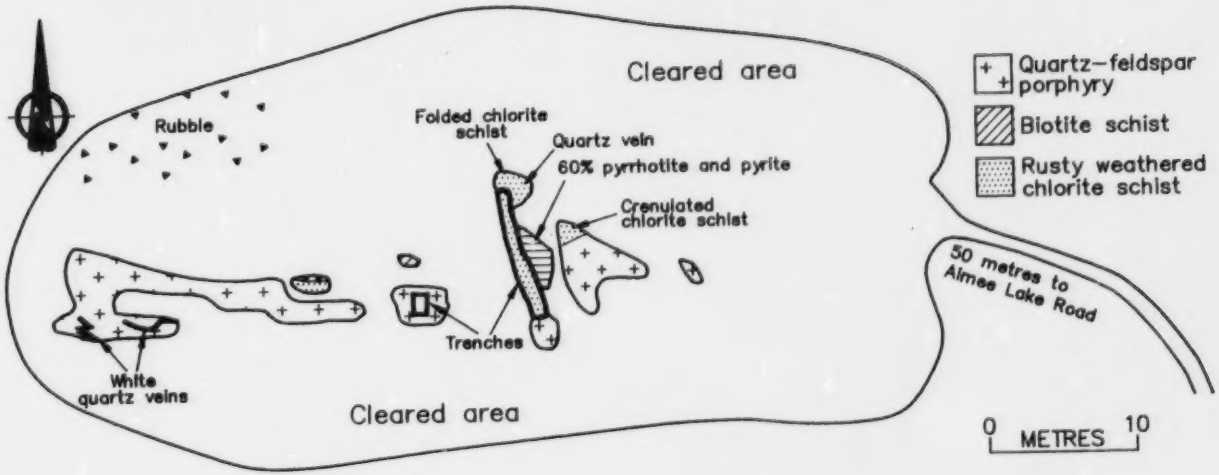


Figure 79–2: Detailed geology, and trench locations at occurrence #79 (63K/13N).

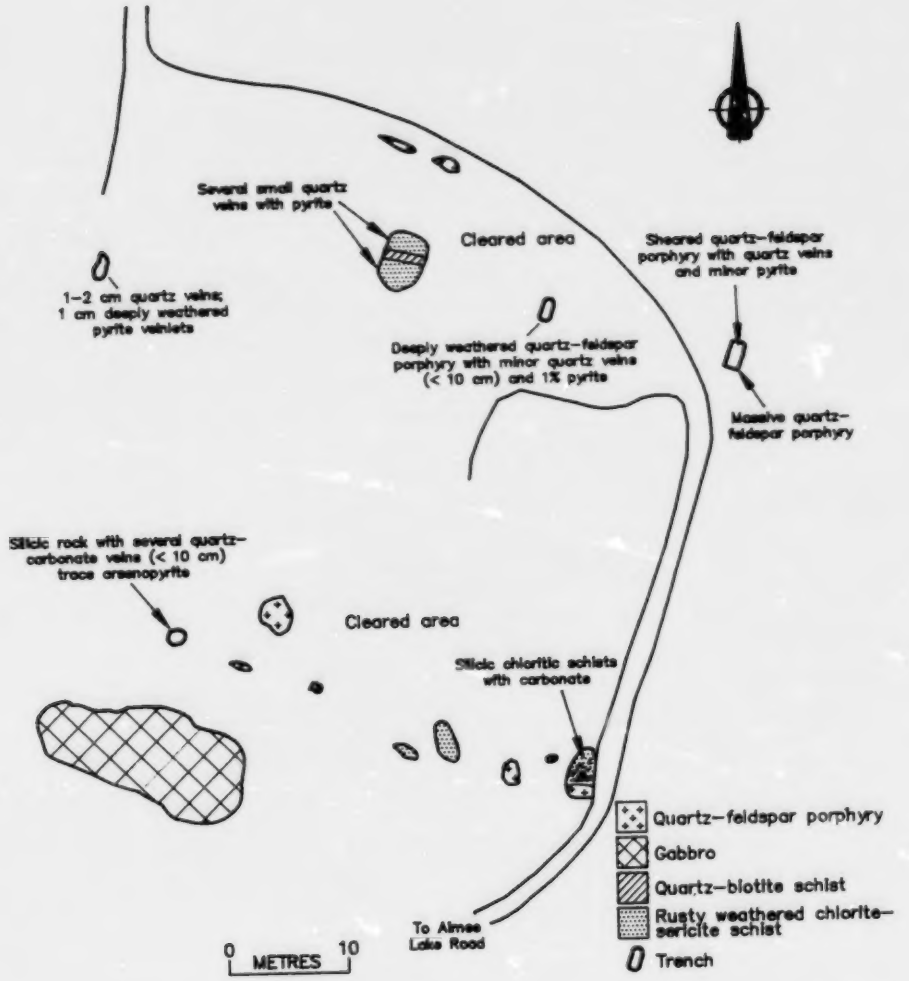

Several small quartz veins with pyrite
Cleared area
Sheared quartz–feldspar porphyry with quartz veins and minor pyrite
1–2 cm quartz veins; 1 cm deeply weathered pyrite veinlets
Deeply weathered quartz–feldspar porphyry with minor quartz veins (< 10 cm) and 1% pyrite
Massive quartz–feldspar porphyry
Silicic rock with several quartz–carbonate veins (< 10 cm) trace arsenopyrite
Cleared area
Silicic chloritic schists with carbonate
Quartz–feldspar porphyry
Gabbro
Quartz–biotite schist
Rusty weathered chlorite–sericite schist
Trench
To Almaa Lake Road
0 METRES 10

Figure 79–3: Detailed geology, and trench locations at occurrence #79 (63K/13N).

LOCATION: 82
UTM: 6087533N/327487E

NAME:
AREA: Approximately 250 km north of the northeastern tip of Bluenose Lake

AIRPHOTO: A26397-111

ACCESS:
Via plane to Bluenose Lake from Flin Flon.

EXPLORATION SUMMARY:
Occurrence noted by Bateman and Harrison (1945).

GEOLOGICAL SETTING:
The occurrance was plotted near the contact between biotite-metadiorite gneiss and hornblende gneiss and schist (Bateman and Harrison, 1945).

MINERALIZATION:
None found during field examination.

GEOCHEMICAL DATA:
None.

CLASSIFICATION:
Not classified.

REFERENCES:

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

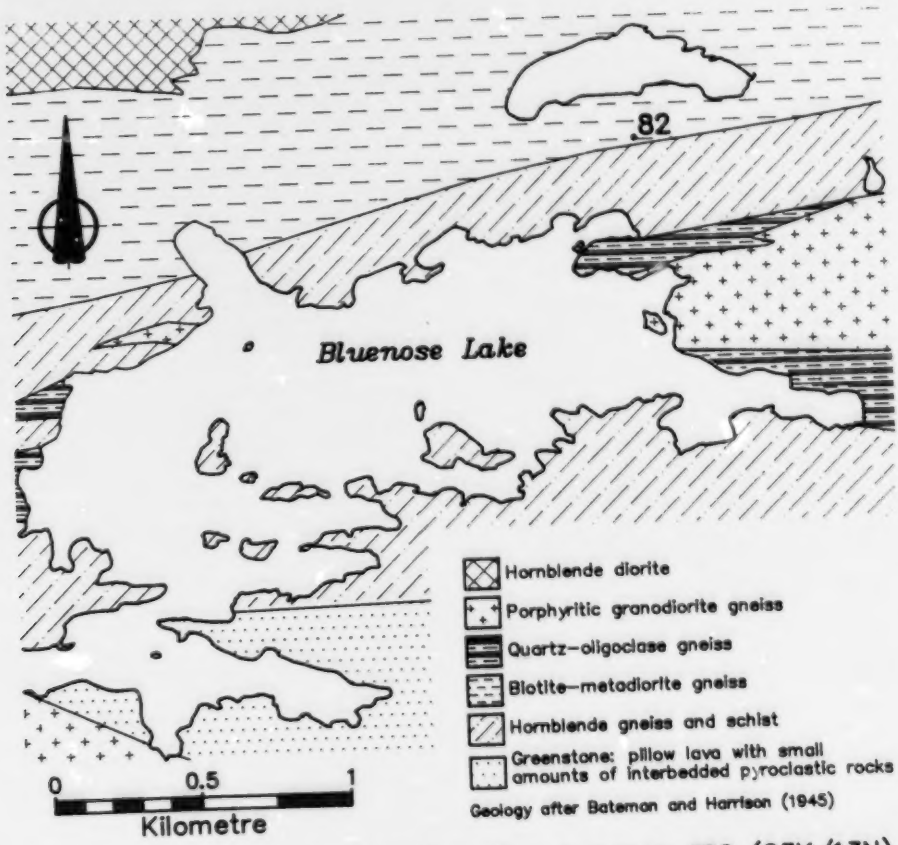


Figure 82–1: Geological setting of occurrence #82 (63K/13N).

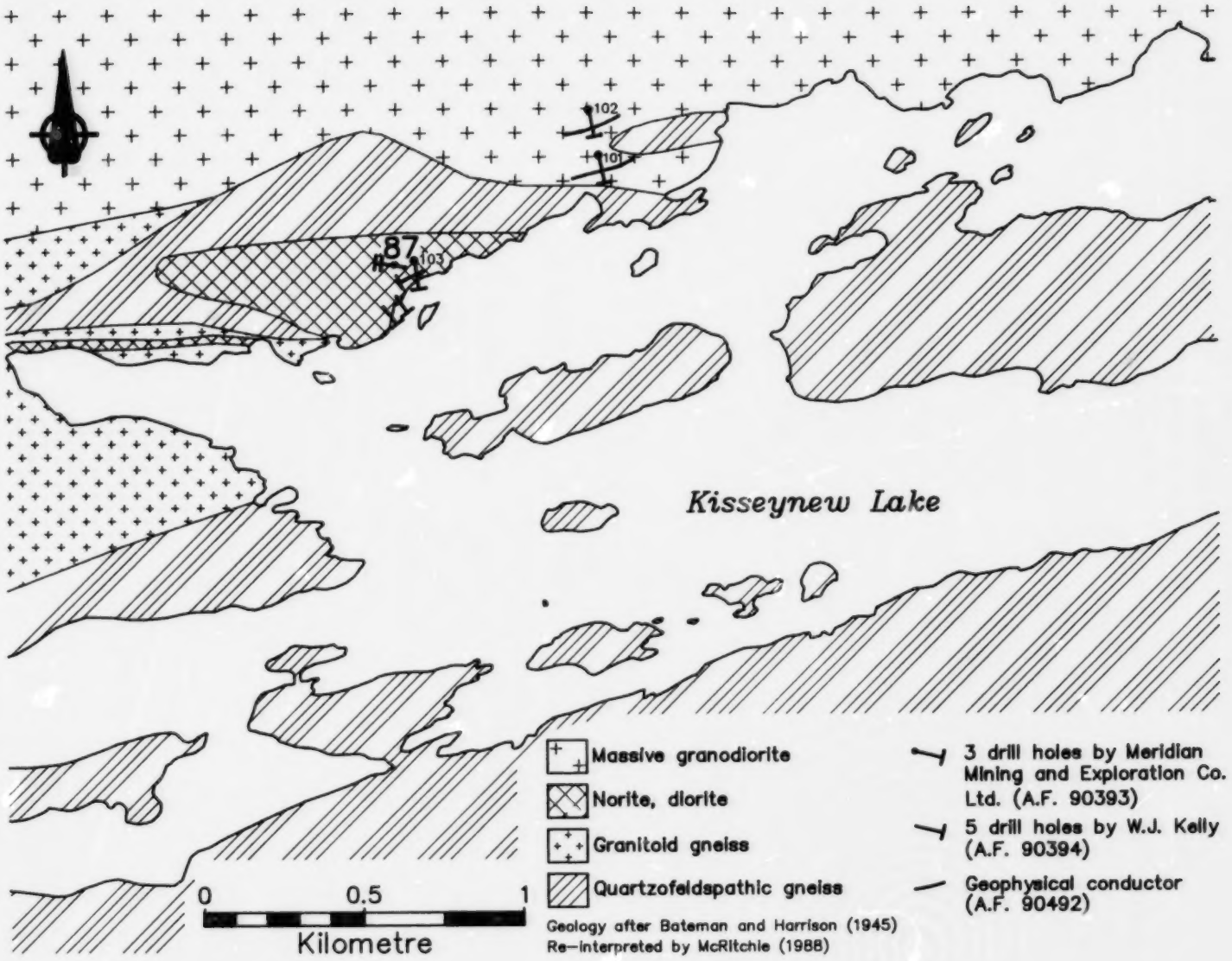


Figure 87-1: Geological setting of occurrence #87 (63K/13N).

LOCATION: 87
UTM: 6093552N/327836E

NAME:
AREA: North Kisseynew Lake, approximately 4.5 km west, southwest of Lobstick Bay.

AIRPHOTO: A26328-216

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

In 1954 W.J. Kelly completed a geophysical survey on the Nickelbell claims and drilled five holes totalling 321 m. Meridian Mining and Exploration Co. Ltd. conducted a magnetometer survey on the Kidd claims in 1968 and drilled three holes (305 m) in 1969.

GEOLOGICAL SETTING:

Bateman and Harrison (1945) outlined two noritic intrusive complexes located south of Imperial Lake and 2 km to the east on the north shore of Kisseynew Lake. A 1 x 2 km pod south of Imperial Lake ranges from leuconorite to orthopyroxenite with east- and west-trending tails wedging out into the adjacent granitoid gneisses and quartzofeldspathic gneisses. Drilling was conducted on the eastern pod of intrusive gabbro and ultramafics which form a prominent though highly weathered knoll (McRitchie, 1986).

MINERALIZATION:

Four of W.J. Kelly's five drill holes intersected scattered to disseminated pyrrhotite. Drill hole 1 intersected 60 m of disseminated pyrrhotite. Meridian Mining and Exploration Co. Ltd. drill core from MM 103 intersected 5-10% pyrrhotite and chalcopyrite in norite and pyroxenite over 3 m. Drill holes MM 101 and MM 102 reported moderate (20-35%) pyrite and rare chalcopyrite in biotite-graphite schists and gneisses.

GEOCHEMICAL DATA:

Meridian Mining and Exploration Co. Ltd. obtained values of 0.17 - 0.23% Ni and 0.10 - 0.07% Cu over 3 m.

CLASSIFICATION:

Disseminated pyrrhotite in noritic intrusion.

REFERENCES:

Assessment Files 90392, 90393, 90394
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

McRitchie, W.D.
1986: Kisseynew Project: Geological Reconnaissance of Kisseynew Lake West (63K/13 NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

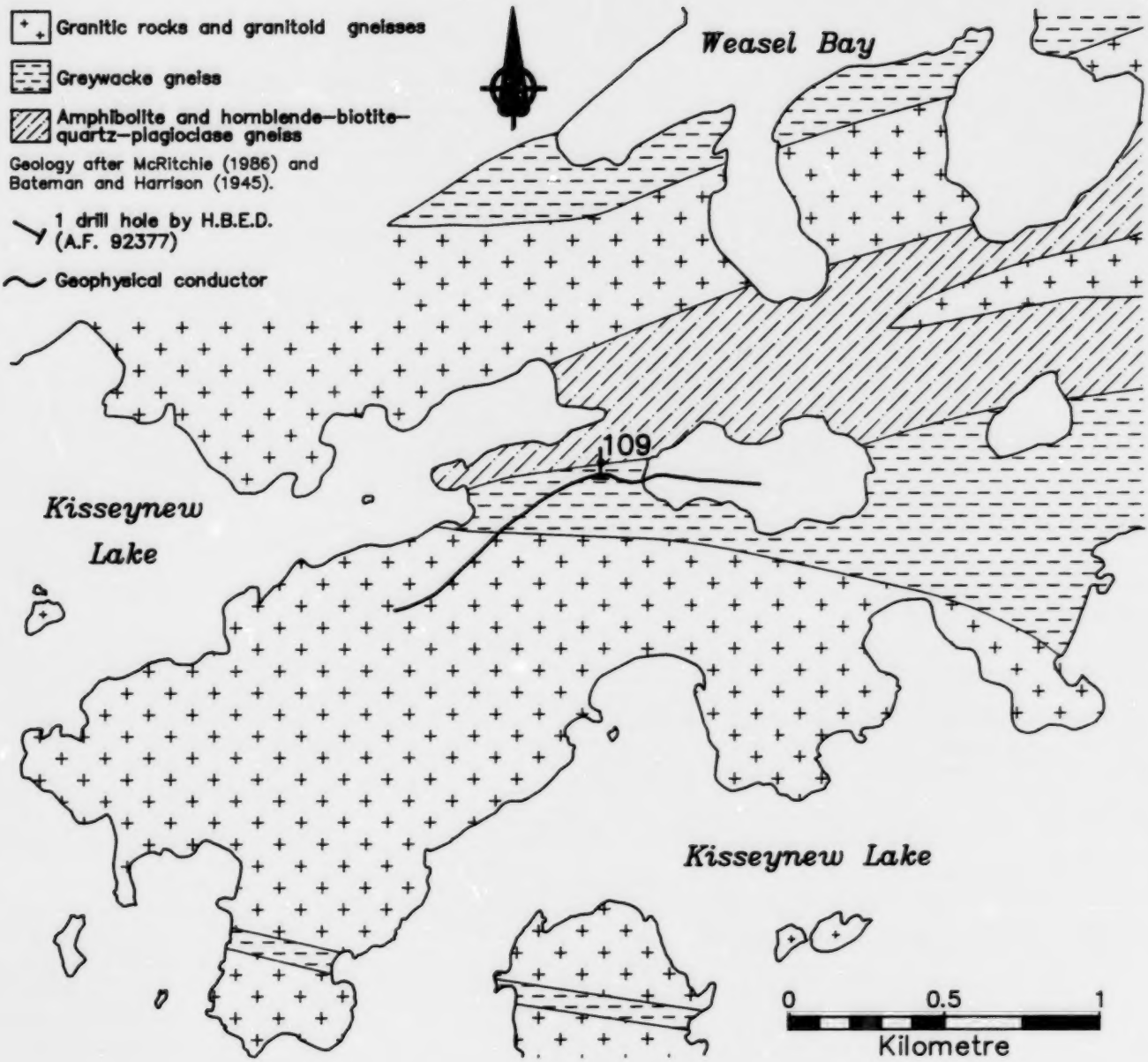


Figure 109–1: Geological setting of occurrence #109 (63K/13N).

LOCATION: 109
UTM: 6089169N/316027E

NAME:
AREA: Near Kisseynew Lake and 900 m east of the Saskatchewan border.

AIRPHOTO: A26364-76, 109

ACCESS:

Via plane to Weetago Bay (Kisseynew Lake) or via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

H.B.E.D. drilled one 95 m hole on C.B. 10553 (Yes claims) in 1982.

GEOLOGICAL SETTING:

The occurrence is situated near a contact between greywacke gneisses and amphibolite with hornblende-biotite-quartz-plagioclase and amphibolite with hornblende-biotite-quartz-plagioclase gneiss. Granitic and granitoid gneisses are also present (Fig. 109-1).

MINERALIZATION:

The anomaly appears to have been caused by a few thin, scattered, muddy argillaceous to chloritic shear planes (possibly graphitic). Some thin stringers and trace (1%) pyrite in quartz-feldspar-biotite-garnet-chlorite schist were reported.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Disseminated sulphide and graphite, not classified.

REFERENCES:

Assessment File 92377
Manitoba Energy and Mines, Minerals Division.

McRitchie, W.D.
1986: Kisseynew Project: Geological reconnaissance of Kisseynew Lake West (63K/13 NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

Tanton, T.L.
1941: Flin Flon, Map 632A, one inch equals one mile; Geological Survey of Canada, Ottawa.

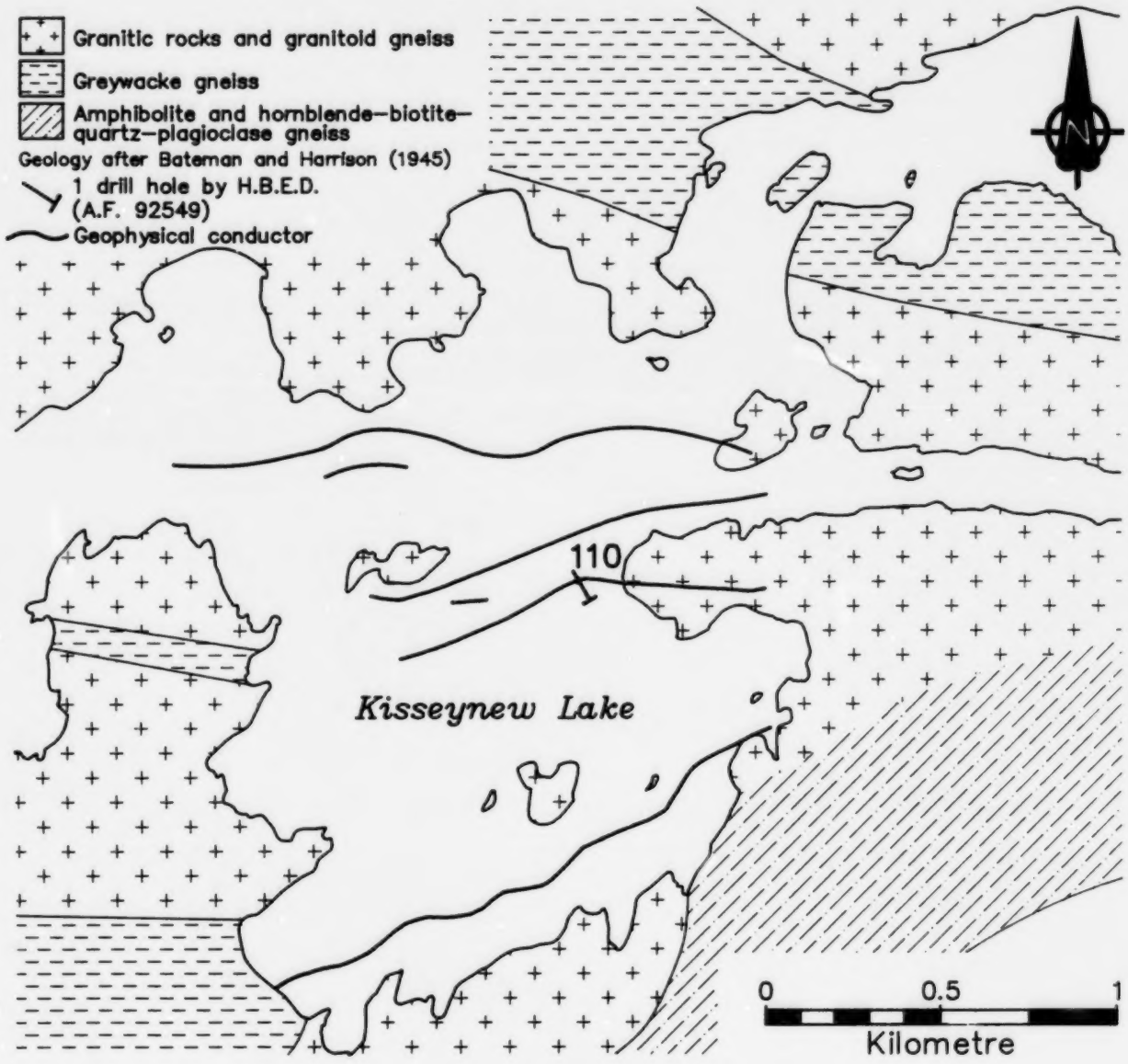


Figure 110–1: Geological setting of occurrence #110 (63K/13N).

LOCATION: 110
UTM: 6087542N/317254E

NAME:
AREA: Kisseynew Lake on the eastern side of Weetago Bay.

AIRPHOTO: A26364-76

ACCESS:

Via boat from Lobstick Narrows at the eastern end of Kisseynew Lake.

EXPLORATION SUMMARY:

H.B.E.D. acquired the Yes claims in 1979 and completed an airborne E.M. survey in 1981. One drill hole totalling 99 m was drilled in 1983 on C.B. 10555.

GEOLOGICAL SETTING:

The area is underlain by the sedimentary gneisses of the Kisseynew complex including greywacke gneiss, granitoid gneiss, granite and amphibolitic to hornblendic gneiss (Bateman and Harrison, 1945; McRitchie, 1986).

MINERALIZATION:

A 2 m graphitic section with 5% pyrite in stringers and patches plus a number of 10-30 cm sections with up to 15% pyrite stringers and patches were intersected (A.F. 92549).

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Sulphide-bearing stratum(?)

REFERENCES:

Assessment File 92549
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

McRitchie, W.D.
1986: Kisseynew Project: Geological Reconnaissance ofKisseynew Lake West (63K/13 NW); Manitoba Energy and Mines, Report of Field Activities 1986, p. 96-99.

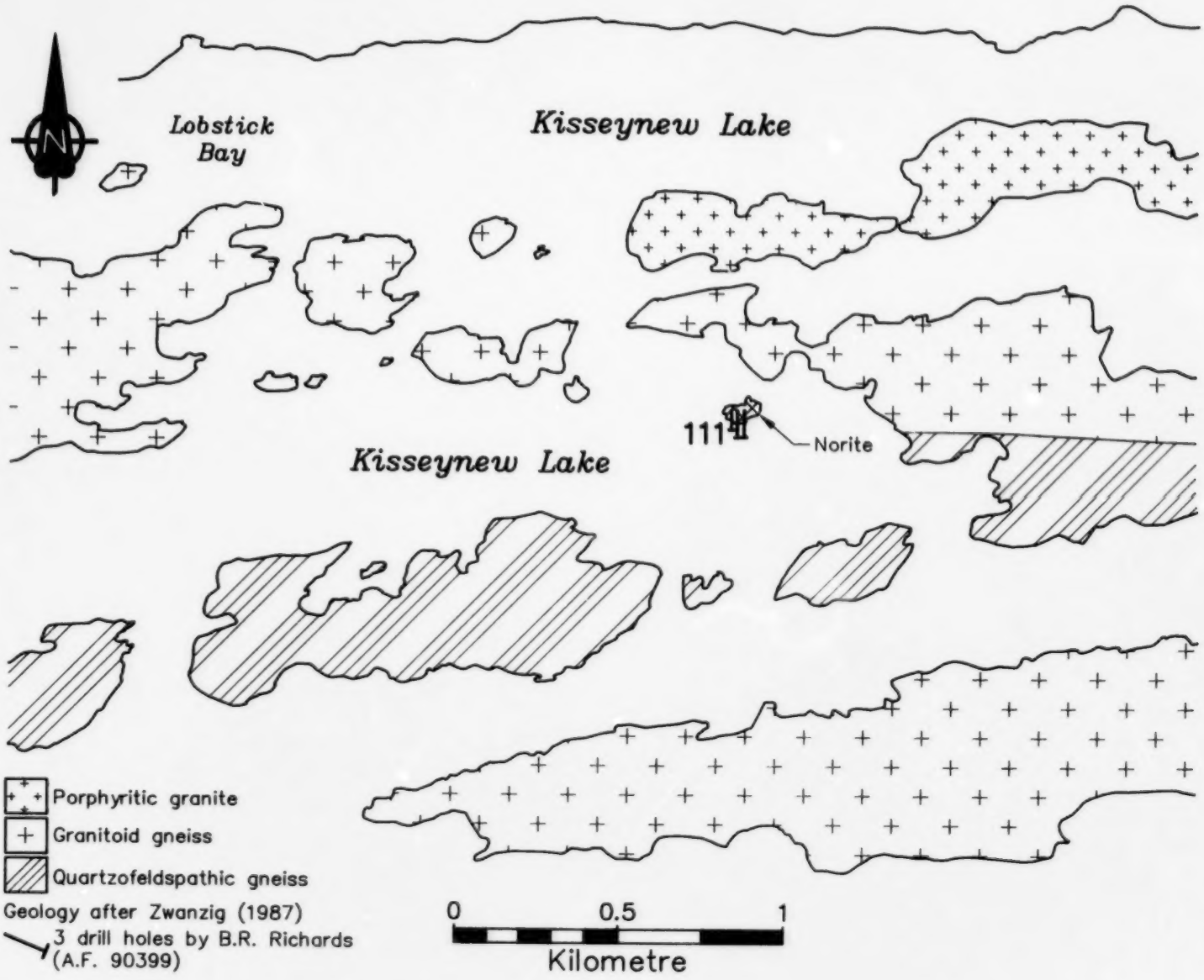


Figure 111–1: Geological setting of occurrence #111 (63K/13N).

LOCATION: 111
UTM: 6094932N/334118E

NAME:
AREA: Small island south of Lobstick Bay in Kisseynew Lake.

AIRPHOTO: A26328-30

ACCESS:

Via Duval Lake Road to Lobstick Narrows and boat on Kisseynew Lake.

EXPLORATION SUMMARY:

R.B. Richards drilled three holes totalling 229 m on Spud 21 in 1954.

GEOLOGICAL SETTING:

The occurrence is located on the northern side of the Defender Lake dome (Froese and Gall, 1981). The rock types includes granitoid gneiss of the Kisseynew sedimentary gneiss belt. The small island is predominantly norite (Bateman and Harrison, 1945; A.F. 90399).

MINERALIZATION:

The drill core contained minor pyrrhotite and trace chalcopyrite.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Probably disseminated magmatogenic sulphide in norite.

REFERENCES:

Assessment File 90399
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

Froese, E. and Gall, Q.
1981: Geology of the eastern vicinity of Kisseynew Lake, Manitoba; in Current Research, Part A, Geological Survey of Canada, Ottawa, Paper 81-1A, p. 311-313.

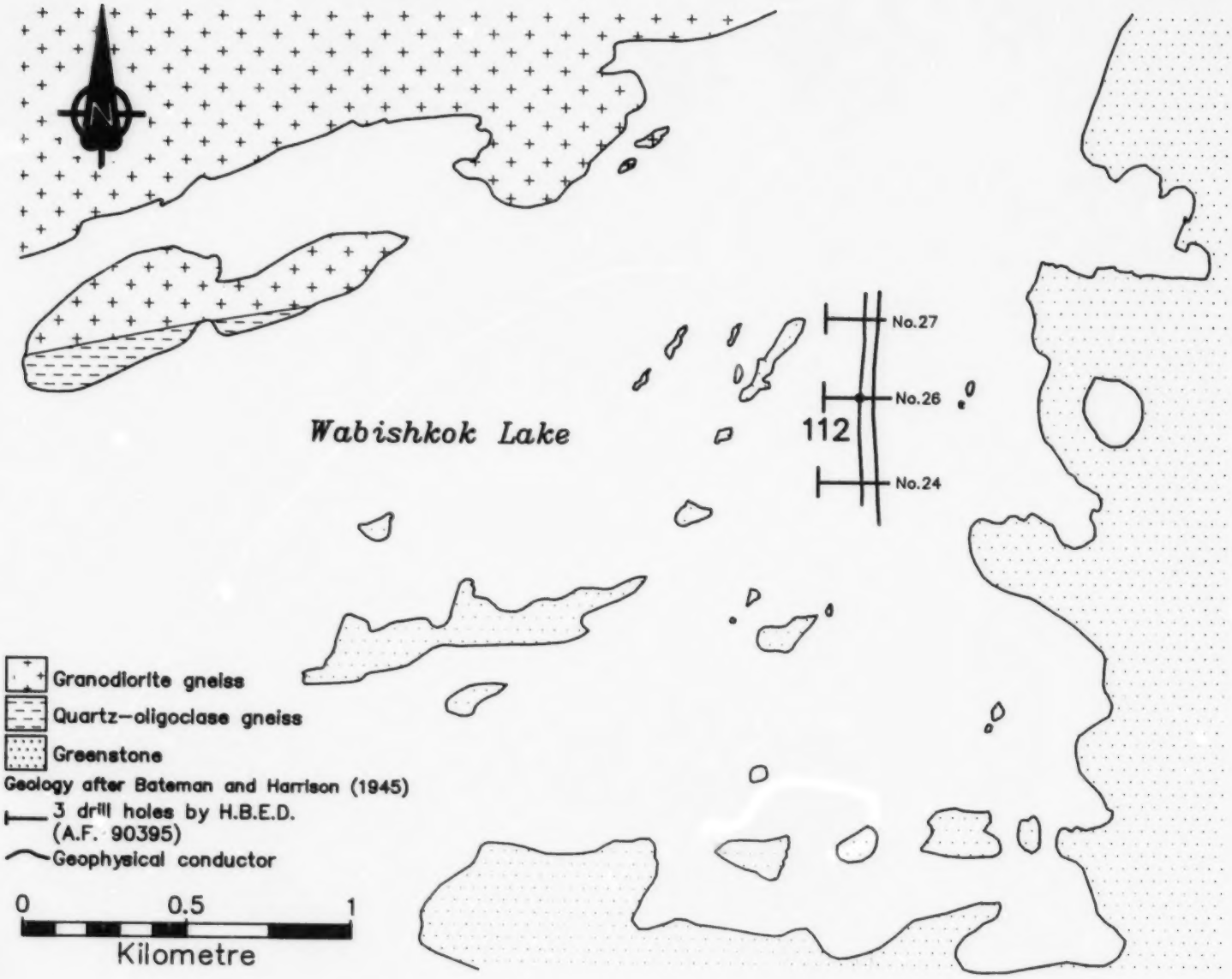


Figure 112–1: Geological setting of occurrence #112 (63K/13).

LOCATION: 112
UTM: 6086245N/337486E

NAME:
AREA: Wabishkok Lake.

AIRPHOTO: A26398-106

ACCESS:

Via Lac Aimée Road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

H.B.E.D. drilled one drill hole totalling 286 m on the Nod 113 claim in 1951.

GEOLOGICAL SETTING:

Predominantly mafic volcanic rocks (Bateman and Harrison, 1945). The drill holes intersected andesite, feldspar porphyry, biotite-sericite schists, chloritic schists, hornblende-chlorite schists, sericite schist and siliceous chloritic schist.

MINERALIZATION:

Drill hole 24 intersected five layers of near solid to solid sulphide that range in thickness from 30 cm to 1 m. One 30 cm intersection contains graphite. The 80 m thick host rocks to the sulphide layers consist mainly of chloritic schists, sericitic schists, siliceous hornblende-chlorite schists, amphibolite and chloritic andesite.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Probably sulphide strata. The sericitic and chloritic schists may indicate hydrothermal alteration.

REFERENCES:

Assessment File 90395
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

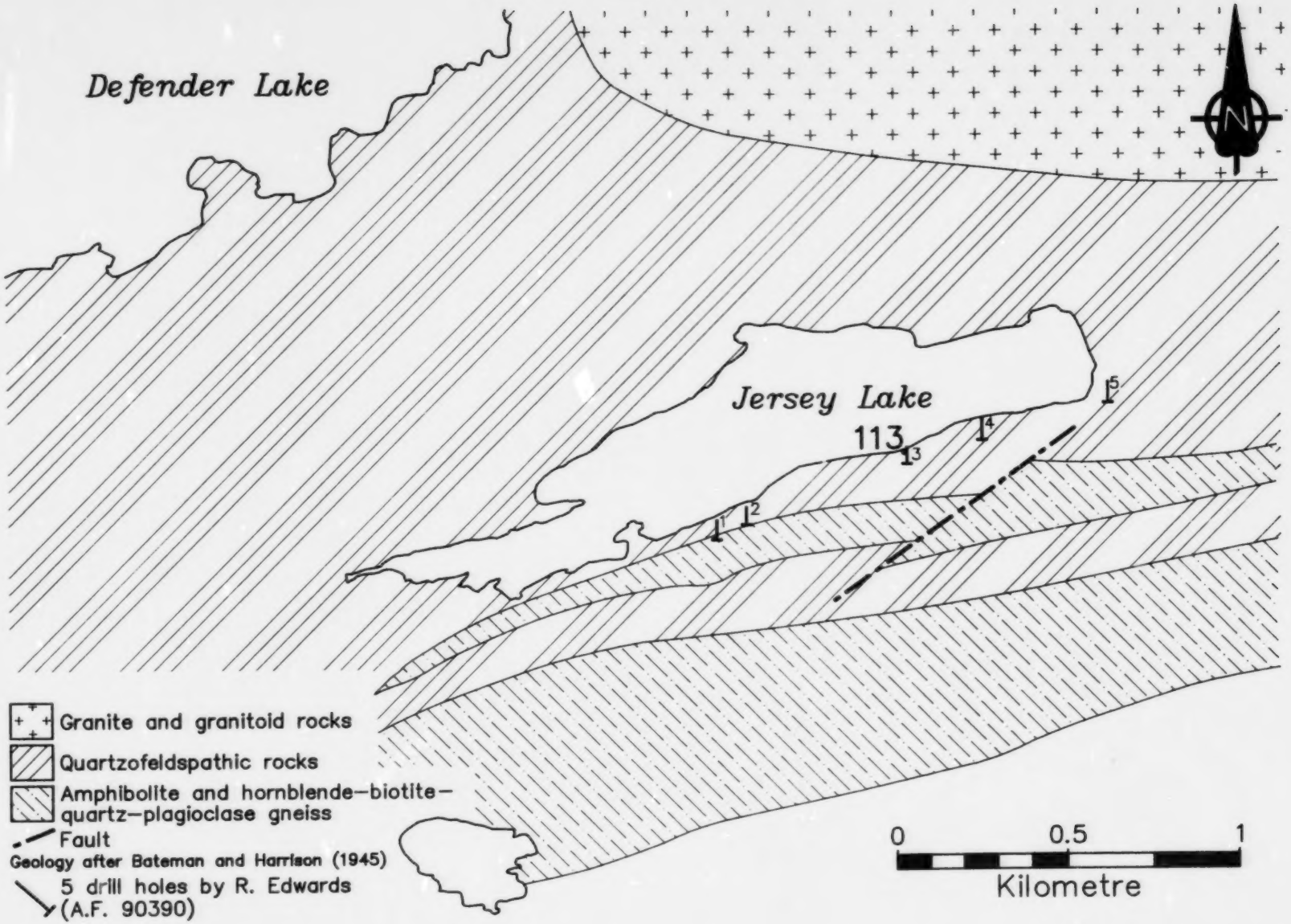


Figure 113–1: Geological setting of occurrence #113 (63K/13N).

LOCATION: 113
UTM: 6089347N/327617E

NAME:
AREA: Jersey Lake, approximately 2 km south of the east end of Defender Lake.

AIRPHOTO: A26397-110

ACCESS:
Via plane from Flin Flon.

EXPLORATION SUMMARY:
R. Edwards drilled five drill holes totalling 305 m on the Boja claims in 1955.

GEOLOGICAL SETTING:
The area is underlain by quartzofeldspathic gneisses of the Kisseynew complex and the Amisk group amphibolite. A northeast-southwest striking fault was noted south of Jersey Lake by Bateman and Harrison (1945). Drill logs indicated a contact between granite and greenstone, which probably represent the quartzofeldspathic gneiss and amphibolite.

MINERALIZATION:
Sulphides (pyrite?) and some chalcopyrite were noted in greenstone.

GEOCHEMICAL DATA:
None.

CLASSIFICATION:
Disseminated sulphides, not classified.

REFERENCES:

Assessment File 90390
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

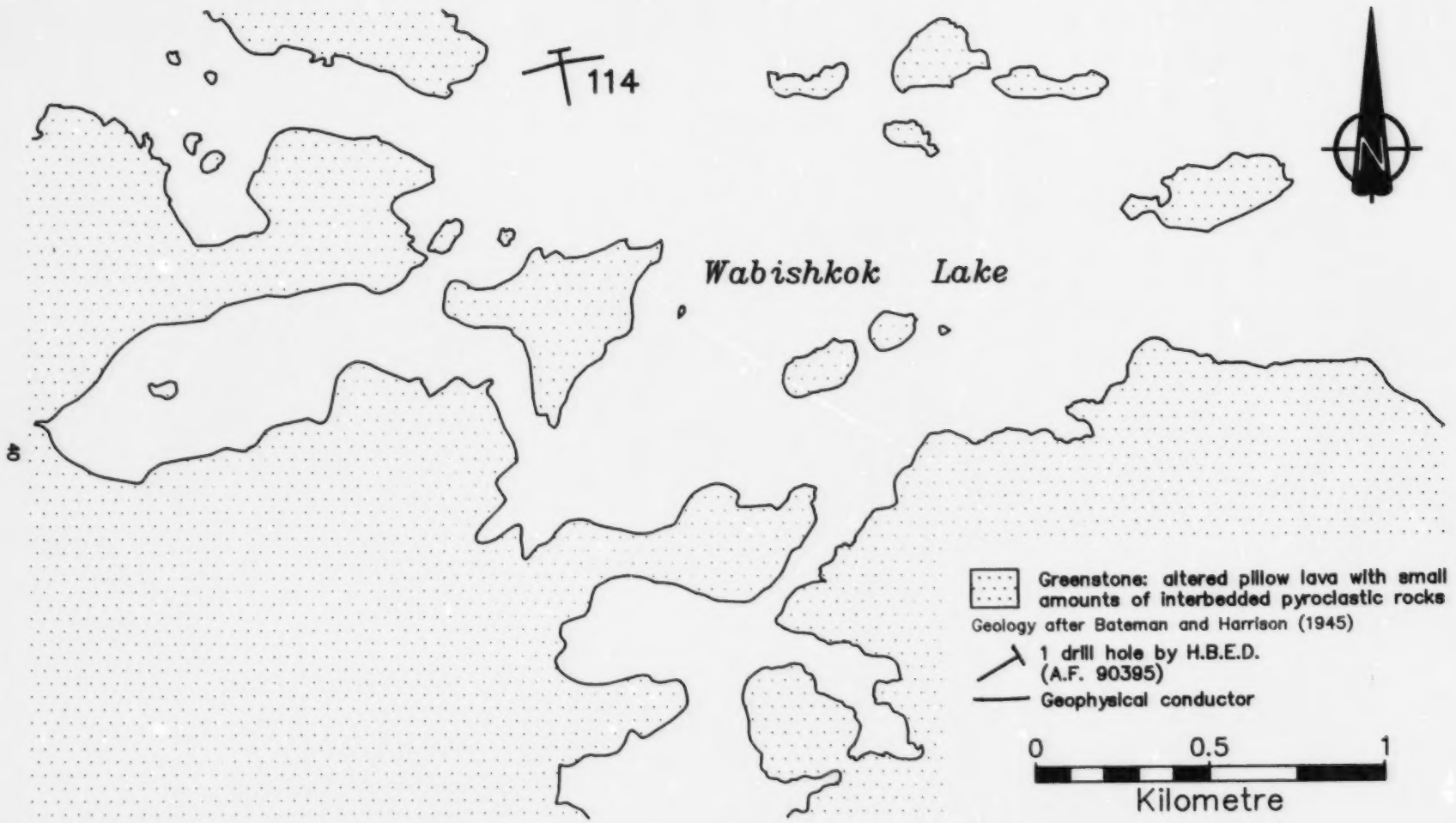


Figure 114–1: Geological setting of occurrence #114 (63K/13N).

LOCATION: 114
UTM: 6085569N/334138E

NAME:
AREA: Wabishkok Lake.

AIRPHOTO: A26328-23

ACCESS:

Via Aimée Lake road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

Geophysical surveys and one drill hole (156 m) completed on the Nod 100 claim by H.B.E.D. in 1951.

GEOLOGICAL SETTING:

The area is underlain by mafic volcanic rocks (Bateman and Harrison, 1945). Drill records report chloritic, sericitic, biotitic and siliceous andesite, feldspar porphyry, chlorite schist and vein quartz.

MINERALIZATION:

A 75 cm section of near solid to solid pyrrhotite and pyrite structurally overlies a 25 m section of moderately mineralized chloritic schist and chloritic andesite. Two 40 cm thick quartz veins were also intersected.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Probably sulphide stratum. Extensive chloritization may be an alteration product.

REFERENCES:

Assessment File 90395
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

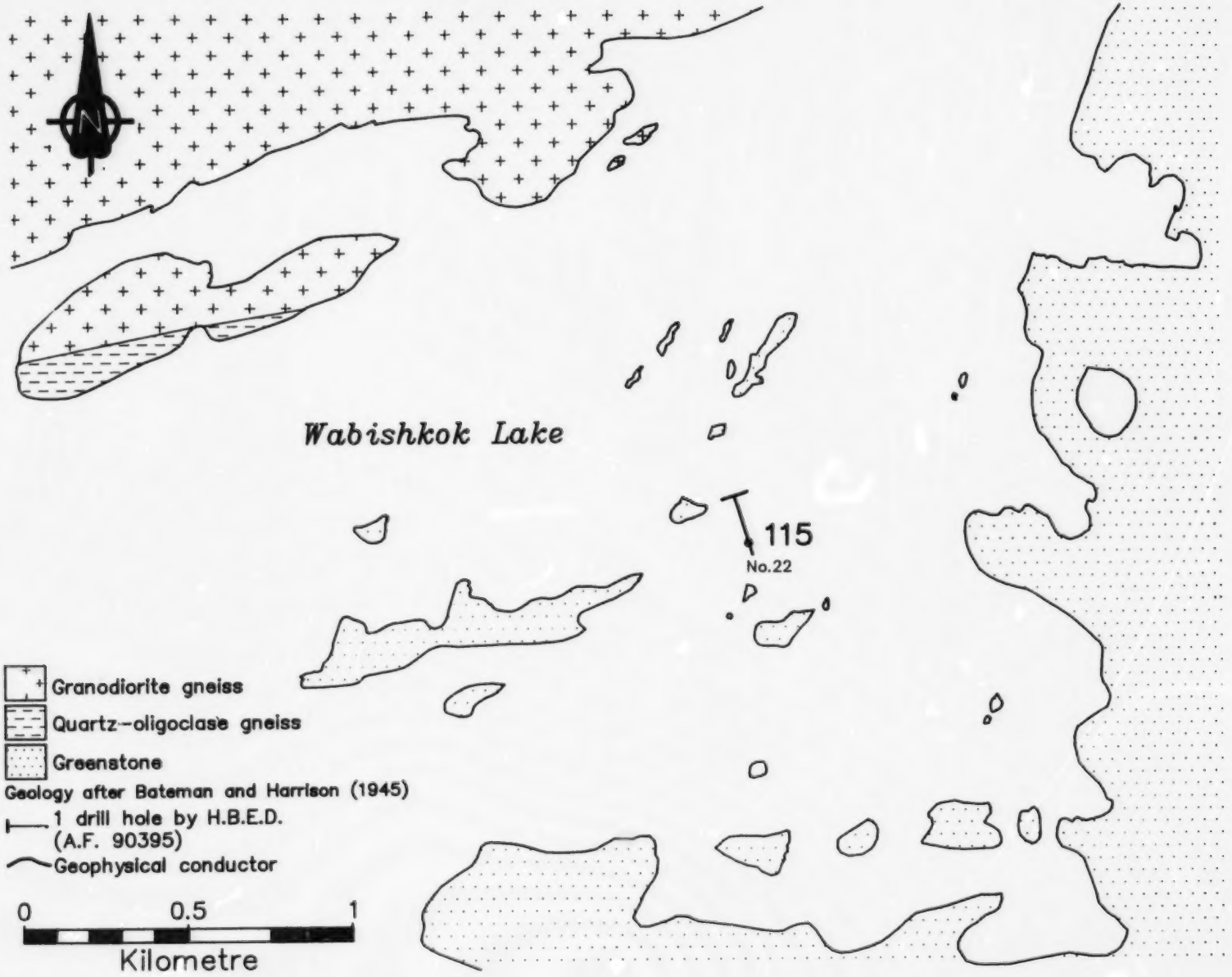


Figure 115-1: Geological setting of occurrence #115 (63K/13N).

LOCATION: 115
UTM: 6086036N/337217E

NAME:
AREA: Wabishkok Lake.

AIRPHOTO: A26398-106

ACCESS:

Via Aimée Lake road and boat on Wabishkok Lake.

EXPLORATION SUMMARY:

H.B.E.D. drilled a 188 m hole in 1951.

GEOLOGICAL SETTING:

The area is undertaken by an assemblage of altered amygdaloidal pillow lava interbedded pyroclastic rocks and irregular masses of intrusive amphibolite (Bateman and Harrison, 1945). H.B.E.D. drill records report abundant siliceous hornblende and/or chlorite-rich andesite and schist.

MINERALIZATION:

Three layers of solid to near solid pyrrhotite and pyrite, 20-30 cm thick occur in a 10 m thick section that also contained a 60 cm thick graphitic chlorite schist with moderate pyrrhotite and trace chalcopyrite.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Probably sulphide strata.

REFERENCES:

Assessment File 90395
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

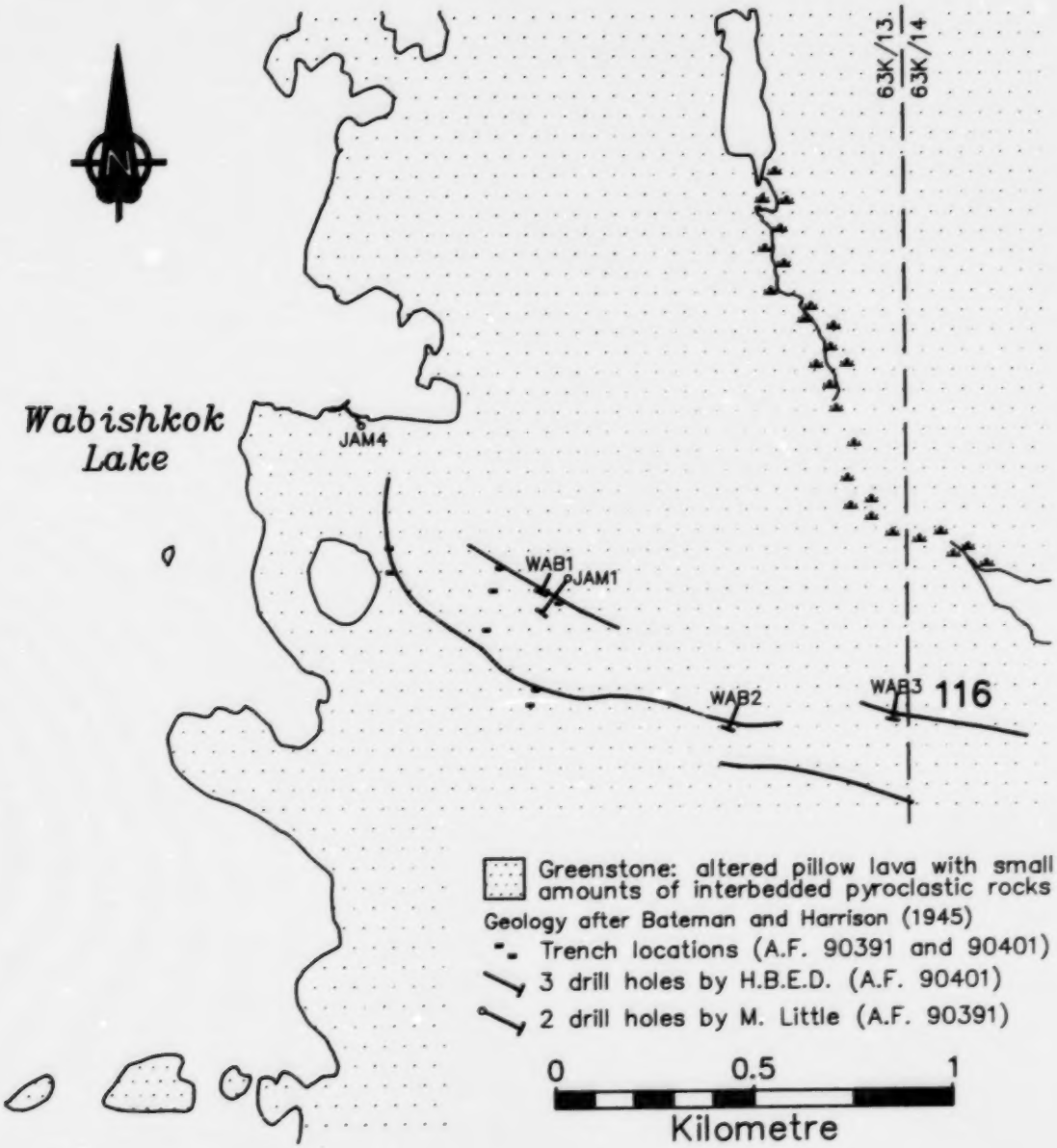


Figure 116–1: Geological setting of occurrence #116 (63K/13N).

LOCATION: 116
UTM: 6086388N/338607E

NAME:
AREA: East end of Wabishkok Lake.

AIRPHOTO: A26398-106

ACCESS:

Via Almée Lake road and traverse.

EXPLORATION SUMMARY:

The area was staked as the J.A.M. claims and two holes (60 m) drilled in 1949. H.B.E.D. conducted an E.M. survey in 1962 and drilled three holes to test the anomalies.

GEOLOGICAL SETTING:

The area is underlain by mafic volcanic rocks (Bateman and Harrison, 1945). The drill holes encountered metadiorite, siliceous and rhyolite tuffs, andesite, feldspar porphyry, chlorite schists and gabbro.

MINERALIZATION:

Near solid to solid pyrrhotite and minor (2-5%) pyrite layers, (37 cm, 35 cm and 180 cm thick), layers were intersected in one drill hole. Hole WAB 3 contained intersections of mineralized chloritic, tuffaceous rock with a 60 cm section of near solid pyrite and pyrrhotite and minor chalcopyrite.

GEOCHEMICAL DATA:

None.

CLASSIFICATION:

Probably sulphide stratum. The presence of sulphide-bearing chlorite schist in proximity to rhyolitic tuffs indicates that the area could contain massive sulphide type deposits.

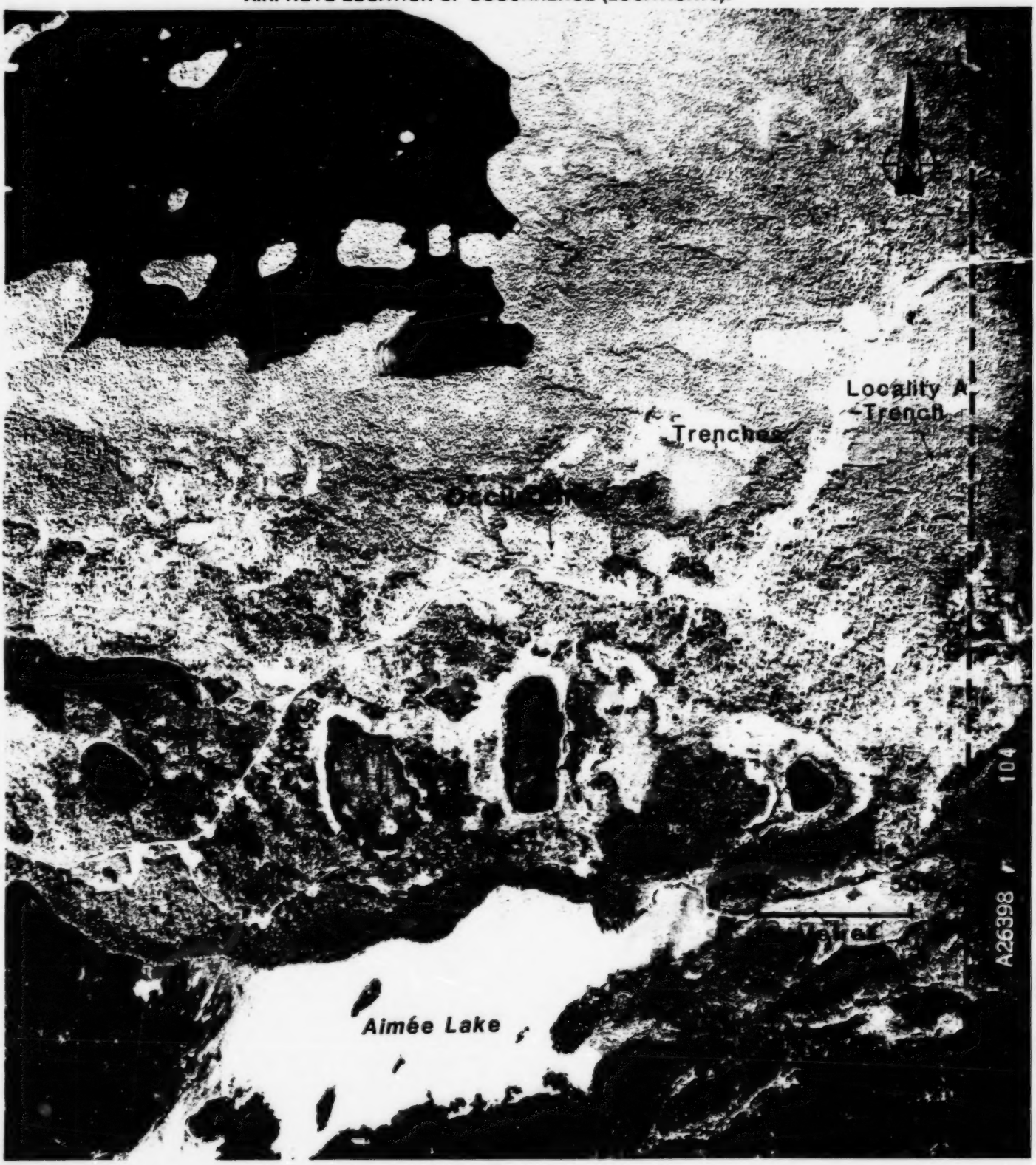
REFERENCES:

Assessment Files 90391, 90401
Manitoba Energy and Mines, Minerals Division.

Bateman, J.D. and Harrison, J.M.
1945: Mikanagan Lake, Map 832A, one inch equals one mile; Geological Survey of Canada, Ottawa.

APPENDIX A

AIRPHOTO LOCATION OF OCCURRENCE (LOCATION79).



Manitoba
Energy and Mines

MDS MAP No. 3 (1988)

MINERAL DEPOSITS AND OCCURRENCES IN THE WEASEL BAY (63K/13NW) AND DEFENDER LAKE (63K/13NE) AREA, MANITOBA.

To accompany Report No. 3 of the Mineral Deposit Series

MANITOBA MINERAL DEPOSIT SERIES

The Mineral Deposit Series is designed to provide the explorationist with an up-to-date reference with accurate geographic locations for known mineralization within the Province. A descriptive classification of the mineralization into deposit types will assist mineral explorationists in the formulation of exploration strategies.

Significant values for tonnage and metal grades are designated as deposits and are highlighted with bold deposit type symbols. Where more than one deposit type is known to occur at a locality, the deposit type with the greatest economic potential is indicated. For example, a 30 cm thick graphitic sulphide layer of the massive sulphide deposit type is indicated instead of a 2 m thick graphitic sulphide layer of the chemical sediment deposit type at the same locality. Mineral occurrences of lesser significance may be referenced in a companion report to enable the explorationist to modify the classifications in keeping with new developments or concepts.

The basic publication unit for the Mineral Deposit Series is the 1:20 000 map sheet, on which deposits and occurrences are indexed consecutively. Where the density of data warrants the publication of a 1:20 000 map sheet (e.g. 63K/13SE), location numbers may not be consecutive and missing numbers will be found on the remaining portions of that NTS map sheet (e.g. 63K/13SW).

The accompanying report contains a synthesis of known information for each locality on: Exploration History, Geological Setting, Mineralization, Deposit Type and References. The reports contain detailed maps that include precise locations, drill hole and trench locations and where available, detailed geological maps of the property. The data base used to derive the reports will reside in selected deposit files in the possession of the mineral deposit geologists at the Geological Services Branch.

This Mineral Deposit Series will be updated periodically as new information becomes available. Consequently, any errors, omissions or suggestions for improvement should be brought to the attention of the Director, Geological Services Branch.

GEOLOGICAL LEGEND

- 6 — Granitic rocks and granitoid gneisses
- 5 — Mafic intrusions: Norite, gabbro, diorite
- 4 — Quartzofeldspathic gneiss and migmatite
- 3 — Greywacke gneiss and migmatite
- Amphibolite and hornblende-biotite-quartz-plagioclase gneiss
- 1 — Mafic to intermediate volcanic flows, related breccia and intrusions

SYMBOLS

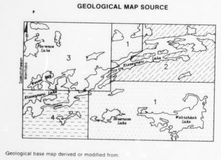
GEOLOGICAL SYMBOLS

- Geological boundary
- Fault
- Geophysical conductor
- Area encompassed by Mineral Deposit File

TOPOGRAPHICAL SYMBOLS

- Marsh, swamp
- Rock, island, reef
- 950 Contour
- Road

GEOLOGICAL MAP SOURCE


Weasel Bay
Defender Lake
Weasel Lake
Defender Lake
Weasel Lake
Defender Lake
Weasel Bay